

**Conservation and Sustainable Use of Biodiversity in
Dibeen Nature Reserve Project**

Project Number JOR/02/G35, 00013204, PIMS # 1881

Final Evaluation Report

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ACRONYMS AND ABBREVIATIONS

APR	Annual Progress Report
AWP	Annual Work Plan
CBD	Convention on Biological Diversity
CDR	Combined Delivery Report
CSUBDNR	Conservation and Sustainable Use of Biodiversity in the Dibeen Nature Reserve Project
DC	Dubai Capital
DNR	Dibeen Nature Reserve
EU	European Union
FD	Forestry Department
FE	Final Evaluation
GEF	Global Environment Facility
GEF/RTC	Regional Task Coordinator
GoJ	Government of Jordan
IR	Inception Report
IUCN	The World Conservation Union
LFM	Logical Framework Matrix
M&E	Monitoring and Evaluation
MoA	Ministry of Agriculture
MoE	Ministry of the Environment
MoPIC	Ministry of Planning and International Cooperation
MoTA	Ministry of Tourism and Antiquities
MOU	Memorandum of Understanding
MTE	Mid-Term Evaluation
NBSAP	National Biodiversity Strategy and Action Plan
NEAP	National Environment Action Plan
NFP	National Forest Park
NGO	Non-Government Organization
PIR	Project Implementation Report
PM	Project Manager/Management
ProDoc	The Project Document
RFP	Regional Forest Park
RSCN	Royal Society for the Conservation of Nature
SC	Steering Committee
SGP	Small Grants Program
SSC	Social Security Corporation
SMEs	Small-Medium Enterprises
TA	Technical Assistance
TNA	Training Needs Analysis
TOR	Terms of Reference
TPR	Tri-Partite Review
UNDP	United Nations Development Program
UNDP CO	UNDP Country Office
USFD	United States Forestry Department

ACKNOWLEDGEMENTS

The Final Evaluation Team would particularly like to acknowledge the support of the UNDP Jordan and the Royal Society for the Conservation of Nature during this evaluation. We are particularly indebted to the Environmental Specialist, UNDP Jordan, and DNR Project manager at RSCN for their help in planning the focus of the review and organizing the mission.

We would like to put on record our sincerest gratitude to all partners and stakeholders of the Dibeen Nature Reserve who gave of their time, experience and hospitality during the course of the FE and sharing their experiences and insights on this project with us. Without their valuable input our work could not have been accomplished during the short time at our disposal.

The FE team wish to thank the representatives of the local communities who gave of their time during the field visits and proved to be helpful, courteous and informative, and all of whom were supportive of the project and its delivery.

Special thanks go to the Ministry of Planning and International Cooperation, the coordinating agency for the DNR body for hosting the meetings with the Steering Committee and the stakeholders and the feedback presentation.

We would like also to thank the concerned Ministries and agencies of the Government of Jordan for the efforts made by them to ensure a smooth and successful evaluation,

Special thanks to Tim Clairs, GEF Regional Task Manager, for his insights, invaluable comments and inputs during the joint field visit and Mike Murphree for some observations on sustainable use and alternative livelihoods trade-offs.

DISCLOSURE

In accordance with UNDP-GEF Project Monitoring and Evaluation Policies and Procedures¹ the FE makes the following disclosures in the interests of fairness and transparency. The FE makes clear that these issues were disclosed to the UNDP CO and GEF RTC at an early stage in the evaluation and were considered common knowledge at the time of the Final Evaluation and furthermore, the Team Leader did not consider them to constitute a *conflict of interests* under the UNDP-GEF Guidelines.

The Company Via Nova Group and the National Consultant, Dr. Nedal Al-Ouran was part of the team that carried out the Mid Term Evaluation of the same project, *Conservation and Sustainable Use of Biodiversity in Dibeen Nature Reserve*, in July 2006.

The National Consultant, Dr. Nedal Al-Ouran is a board member in the *Jordan Society for Desertification Control and Badia Development*, a national NGO that was part of a consortium of environmental organisations involved in the campaign to ensure that an EIA was carried out on the Social Security Corporation land development in the Dibeen Forest.

¹ <http://thegef.org/MonitoringandEvaluation/MEPoliciesProcedures/mepoliciesprocedures.html>

1.0 EXECUTIVE SUMMARY

Project Execution

The Conservation and Sustainable Use of Biodiversity in Dibeen Nature Reserve Project implementation is through the United Nations Development Programme Jordan and project execution is through National Non-Governmental Organisation Execution, namely the Royal Society for the Conservation of Nature (RSCN) and the designated National Coordinating Agency is the Ministry of Planning and International Cooperation (MoPIC).

The Dibeen Project started in January 2004 for a period of 4 years with a planned closure date of December 2007. All parties signed the Project Document by August 2003. The first budget revision was submitted in November 2003 and the first Annual Work Plan generated from ATLAS was submitted in February 2004 following the Inception Phase in line with the change of 7 project Outputs to 3 Outcomes. The Annual Work Plan (AWP) runs from January to December and the project is currently in the first half of AWP 4. At June 2007, the first half of AWP 4, the budget execution is US\$ 887,574 (80.7%) disaggregated as US\$ 787,574 (78.7%) GEF inputs and US\$ 100,000 (100%) UNDP CO TRAC funds. In-kind contributions from RSCN amounted to US\$ 500,000 by December 31st 2006 and are expected to reach US\$ 600,000 by the end of the project. Parallel funding from the EU LIFE Programme did not materialise because the parallel project to support the Regional Forest Park was abandoned in early 2004.

Project Design and Inception Phase

The formulation of the Dibeen Project came about as a result of concerns over the loss of biological diversity from the larger forest ecosystem identified by the Royal Society for the Conservation of Nature in a GEF Concept Note and submitted to UNDP Jordan in December 1999. It was concerned with establishing a Nature Reserve to protect a core area of the greater Dibeen Forest within a larger protective system modelled upon the French system of Regional Forest Parks.

The Project Document was developed by RSCN. The justification for the project was to conserve the biodiversity values of the forest complex through a Nature Reserve *within the context of a larger National Forest Park*.

The advantages of the regional park approach were that large forest areas could be developed rationally as a single ecosystem, without the problems of conflicting, competing or uncoordinated uses and without the need for 'expensive national park style administrations'. As a result, the forest's overall integrity and biodiversity value would be maintained and each municipality secure a fair share of the development programme. The GEF finances were allocated principally to establish the nature reserve in the core area; however, components of project support (US\$40,000) would facilitate the development of a regional forest park.

Key to this was the development of the Regional Park itself that was to be guided by the Ministry of Tourism and Antiquities (MoTA) that would receive technical aid

from the European Union (EU) from the French Government and financial support through the EU's LIFE Programme. The MoTA submitted a proposal to the EU in 2001 with a total budget of US\$ 317,000 (70% direct grant and 30% MoTA contribution), which was subsequently approved in 2002.

The GEF Project Development Document placed Dibeen Nature Reserve (DNR) firmly in the context of a programme that would develop land use planning for the greater Dibeen forest and appears to recognise the importance of developing a system of land use that incorporated the greater Aleppo pine forest ecosystem as a prerequisite for ensuring the integrity of the biological diversity of the DNR.

Within this context, the Project Document proposed to develop a four-year project to address the threats of fragmentation and degradation of the ecosystem resulting from anthropogenic pressure, including encroachment of settlements and agriculture, hunting and grazing and localised recreation pressure. It was to do this by creating a nature reserve, complete with bylaws and trained management team, to safeguard ecologically significant and vulnerable areas of the forest, and by supporting the development of a Regional Forest Park over the remaining forest complex where sustainable uses of forest resources could be pioneered as alternative livelihoods for local communities. Essentially, it would use project funding to put in place the necessary components for sustainable management of the biodiversity resources of Dibeen Forest.

The Forest Park was to span five local government municipalities, creating the first regionally developed and administered conservation area in Jordan that would give emphasis to land use zoning schemes tied to socio-economic initiatives based upon tourism and recreation to support both conservation and social needs.

Therefore the resulting Project Document developed the rationale for the Dibeen Project, set the DNR within the context of the larger Regional Forest Park, developed seven *outputs* to guide project implementation and set out the modalities for project execution.

In response to changes in the GEF "Strategic Priorities" introduced as part of the GEF policy changes demanded by GEF donors during the GEF-3 replenishment negotiations a project log frame matrix with indicators was retrofitted to the project document during the Inception Phase in January 2004. Therefore the main objectives of the GEF retrofitting mission was to produce a project log frame that was in-line with the new GEF Strategic Priorities and was updated to refer to the *Goal, Objectives*, and *Outcomes* hierarchy logic. It was not a normal Inception Mission in that its objectives were not specifically to look at the changes in situation, risks and assumptions since the project was already developed.

Project Implementation

The Inception Workshop was held on the 18th January 2004, the final draft of the Inception Report was submitted on the 5th March 2004 and the Project Manager was recruited in March 2004. The project has had four project managers; the current incumbent was appointed in October 2005.

During the inception phase the EU-LIFE RFP project was halted and collapsed shortly afterwards. The project has focused its efforts upon establishing the Dibe'en Nature Reserve (DNR) that has been successfully achieved. The socio-economic support programme has been slow to get started and therefore it is not clear how successful this is.

The establishment of the DNR was a remarkable success of the project and activities have picked up with the appointment of the last project manager.

Although not clearly articulated in the Project Document it is widely held that the project is following an “*alternative livelihoods trade-off*” strategy and little effort has been made by the project to develop systems for the sustainable use of forest products other than through tourism within the DNR, which it is doing very successfully.

Project relations with the other key forest management institution, the Forestry Department, have not been as strong as would have been required to develop an ecosystem approach and build national capacity for forest management.

Relations between the project and UNDP have been strained at times however, the UNDP CO has been correctly prosecuting its project assurance role and GEF coordination has been identifying key issues but the project's weak adaptive management framework appears to have prevented any modifications to the project and is the likely cause for the stresses on the relationship between the partners.

Adaptive Management Framework

The project's adaptive management framework is weak, although there is considerable evidence of adaptive management at the site level in relation to the visitor management this process has yet to be formalised. However, larger issues such as the collapse of the RFP and the loss of the ecosystem-wide approach to which the project was unable to respond when assumptions did not hold true and risks were realised are indicative of poor adaptive management.

Current Status

The project has still had a number of significant achievements. The establishment of DNR and the visitor management are considerable. But, questions remain about the sustainability of the GEF *Objective* of conserving biodiversity, and these achievements alone will not bring about the necessary systemic change required to achieve the project's objective, namely; *to establish a nature reserve in Dibe'en Forest to conserve unique and globally significant biodiversity, develop sustainable alternative economic uses of the forest resources in the context of a regional forest park, and build in-country capacity in forest management and conservation-orientated land use planning.*

Overall, the project's reliance on a single strategy, an “*alternative livelihoods trade-off*” approach, to deflect the impacts of human development upon the resources is considered to be risky because the root causes of many of the threats may not be as simple as over-exploitation but are also grounded in development pressures and

compounded by the mix of land tenure arrangements that exist within the Dibe'en Forest ecosystem.

However, the FE considers that RSCN is well placed to address these issues because of its long and successful track record in advocacy. But this needs to be strengthened by greater adaptive management in its approach to ecosystem and biodiversity conservation and through developing its capacity in sustainable use of natural resources alongside the existing “*alternative livelihoods trade-off*” approach.

With the closure of the UNDP-GEF investment in the project due in December 2007 the FE is worried about the sustainability of the wider GEF *Objective* as it relates to biodiversity. However, this must be set beside the RSCN commitment that will ensure continuity after the end of the project.

Recommendations

The FE makes a number of recommendations intended to increase the likelihood of sustainability of the project successes after the closure of the UNDP-GEF investment. These are summarised here as:

- Strengthening linkages with other agencies and institutions at the local level;
- Revisiting the Log Frame Matrix to extend beyond the closure of the UNDP-GEF investment;
- Revitalising the regional or ecosystem approach using whatever resources are available at the local level;
- Strengthening the adaptive management approach to the reserve and the management practices particularly as they relate to sustainable utilisation;
- Common capacity building between the RSCN and the FD, and;
- Developing a common vision amongst all stakeholders regarding the future management of the entire Dibe'en Forest ecosystem.

A full account of the recommendations is given in section 4.0.

Lessons Learned

The FE has found it hard to draw conclusive lessons from the project partly because of the delays early on in the project cycle and partly because not all components of the strategy or “hypothesis” have been fully implemented. However, the FE does consider that the use of a single approach (in addition to the protection of DNR) of the “*alternative livelihoods trade-off*” is a risky strategy and that the risks could be reduced by also developing sustainable use systems for the forests natural values (in addition to tourism) in parallel. Furthermore, the *quid pro quo* of the trade-off should also include issues of authority and responsibility, consideration of the magnitude of any opportunity costs and issues relating to tenure and pricing and dependency of local people versus self-reliance.

2.0 INTRODUCTION

The Final Evaluation (FE) is an integral component of the UNDP GEF project cycle management. It serves as an agent of change and plays a critical role in supporting accountability. Its main objectives are:

1. To strengthen the adaptive management and monitoring functions of the project
2. To ensure accountability for the achievement of the GEF objective
3. To enhance organizational and development learning
4. To enable informed decision-making

The first phase of the Final Evaluation (FE) of the Conservation and Sustainable Use of Biodiversity in Dibeen Nature Reserve² (Dibeen Project³) that is being implemented by the UNDP Jordan, took place from the 3rd June 2007 to the 21st June 2007. The second phase, consisting of further analysis and the FE Report production follows on from this with a delivery date of 26th July 2007, after comments on the first draft have been incorporated.

Evaluation is an integral part of the UNDP-GEF project cycle management. The FE builds on the findings and lessons learned during the Mid Term Evaluation (8 – 25 July 2006) and are guided by the FE Terms of Reference (Annex 1), and UNDP-GEF Project Monitoring and Evaluation Policies and Procedures⁴. The evaluation process is independent of both UNDP and GEF and the opinions and recommendations in this report are those of the authors and do not necessarily reflect the position of the GEF, UNDP, the Ministry of Planning and International Cooperation or the RSCN, however, once accepted the FE becomes a recognised component of the project's documentation.

2.1 STATUS OF PROJECT

The Dibeen Project started in January 2004 for a period of 4 years with a planned closure date of December 2007. The Annual Work Plan (AWP) runs from January to December and the project is currently in the first half of AWP 4.

2.1.1 Summary of the Dibeen Project

Dibeen Forest represents the southwestern geographical limits of the indigenous Aleppo pine forest and the area is the driest in the world in which these pines are known to grow. Preliminary surveys have indicated that the Dibeen Forest complex is one of the best remaining examples of pine-oak forest type that once covered large areas of the Middle East. It is known to support 17 endangered species.⁵

² Project Number JOR/02/G35, 00013204, PIMS # 1881

³ To give the project its full title acronym, CSUBDNR. However, the FE will refer to the project as "the Dibeen Project" or "the project" in the interests of brevity

⁴ <http://thegef.org/MonitoringandEvaluation/MEPoliciesProcedures/mepoliciesprocedures.html>

⁵ 5 plant species, 8 mammal species, 2 reptile species and 2 species of bird

Apart from the endangered species, the forest has potentially important genetic resources. These include the Aleppo pines that have adapted to the exceptionally dry climatic conditions at the "edge of their range" and the wild ancestors of several important cultivated plants, notably the wild olive (*Olea europea*), wild pear (*Pyrus syriaca*) and wild hawthorn (*Crataegus azaralus*).

A 1999 review of Jordan's protected areas⁶ selected Dibe'en as a top priority for the Kingdom's protected areas network and Birdlife International identified the forest as an Important Bird Area in the Middle East⁷.

There are three villages in the immediate vicinity of Dibe'en Nature Reserve (DNR), Kitte, Nahli and Dibe'en, which have a combined population of approximately 7,000 inhabitants. The largest of these is Kitte with over 4,000 inhabitants. Within the greater forest area there are three other villages and a significant refugee settlement with a combined population of approximately 23,000 inhabitants. The majority of the population rely on agriculture for their livelihood, particularly olive farming although the army and municipal governments provide significant waged employment.

Prior to the project the greater forest area was managed under the Forestry Department (FD) of the Ministry of Agriculture (MoA) and management focused principally on sanitary management, propagation of seeds and fire control.

The forest has become an increasingly popular destination for local tourism because of its proximity to Amman and Jerash, and prior to the project there was a government rest house close to the edge of DNR that drew considerable visitors to the area offering food, a play area for children and limited overnight chalet accommodation.

The Project Document (ProDoc) identified the follow threats to the natural values of the forest as:

- Increased and unmanaged visitor pressure.
- Fragmentation of peripheral forest areas.
- Illegal woodcutting and herb collection.
- Hunting and trapping of wildlife.
- Grazing encroachment.

These anthropomorphic pressures were considered to be as a result of the previous management and land use systems were not well regulated to serve conservation objectives and the capacity of the management institution was weak (as it related to biodiversity conservation).

2.1.2 Development of the Dibe'en Project

The formulation of the Dibe'en Project came about as a result of concerns over the loss of biological diversity from the larger forest ecosystem identified by the Royal Society for the Conservation of Nature in a GEF Concept Note (RSCN, undated) and

⁶ The Final Report of the Jordan Protected Areas Policy Project, RSCN, 1996.

⁷ Birdlife International, Conservation Series #2, Important Bird Areas in the Middle East (1994)

submitted to UNDP Jordan in December 1999. It was concerned with establishing a Nature Reserve to protect a core area of the greater Dibeen Forest within a larger protective system of a National Forest Park (NFP) modelled upon the French system of Regional Forest Parks.

RSCN provided the baseline data and necessary information normally collated by the UNDP-GEF Project Development Fund and therefore no PDF⁸ was required for this project⁹.

The Project Document was developed by RSCN. The justification for the project was to conserve the biodiversity values of the forest complex through a Nature Reserve within the context of a larger National Forest Park.

The advantages of the regional park approach were that large forest areas could be developed rationally as a single ecosystem, without the problems of conflicting, competing or uncoordinated uses and without the need for 'expensive national park style administrations'. As a result, the forest's overall integrity and biodiversity value would be maintained and each municipality secure a fair share of the development programme.

The GEF finances were allocated principally to establish the nature reserve in the core area; however, components of project support (US\$40,000) would facilitate the development of a regional forest park, such as:

- Biodiversity inventory
- Joint preparation of a land use plan
- Integrated enforcement of regulations
- Capacity building of staff

The regional park itself, through effective zoning schemes would bring many benefits for the nature reserve. The Project Document identified these as:

- An ecologically valuable buffer zone;
- Reduction in fragmentation;
- Dissipation of visitor pressure, and;
- Maintaining ecological integrity throughout the whole forest complex.

Key to this was the development of the Regional Park itself that was to be guided by the Ministry of Tourism and Antiquities (MoTA) that would receive technical aid from the European Union (EU) from the French Government and financial support through the EU's LIFE Programme. The MoTA submitted a proposal to the EU in 2001 with a total budget of US\$ 317,000 (70% direct grant and 30% MoTA contribution), which was subsequently approved in 2002. The overall objectives and purpose of the European Union-funded LIFE project, as presented in the proposal, were:

⁸ An undated GEF Medium-sized Project Concept Paper was submitted to UNDP Jordan in December 1999

⁹ While this is unusual the FE considers that this was reasonable and reflects the commitment of the National Executing NGO

To introduce in the Burma region a new kind of administrative structure, inspired by the French regional nature parks system, able to promote both the sustainable development of a region with its rich patrimony and its protection. The project purposes were:

- *To prepare a development charter for the region (project area, development and protection programme and plan)*
- *To let this project be shared, accepted and approved by all concerned partners and authorities (local communities, governor, state administration and NGOs)*
- *To have a status for the administrative structure which will manage the park*
- *To set up the administrative structure*
- *To set a plan of action for the first three years after park creation*
- *To set up a law for enabling the dissemination of this pilot project to other compatible sites in the country*

The Project Development Document placed Dibeen Nature Reserve firmly in the context of a programme that would develop land use planning for the greater Dibeen forest and appears to recognise the importance of developing a system of land use that incorporated the greater Aleppo pine forest ecosystem as a prerequisite for ensuring the integrity of the biological diversity of the DNR.

Within this context the Project Document proposed to develop a four-year project to address the threats of fragmentation and degradation of the ecosystem resulting from anthropogenic pressure, including encroachment of settlements and agriculture, hunting and grazing and localised recreation pressure. It was to do this by creating a nature reserve, complete with bylaws and trained management team, to safeguard ecologically significant and vulnerable areas of the forest, and by supporting the development of a Regional Forest Park over the remaining forest complex where sustainable uses of forest resources could be pioneered as alternative livelihoods for local communities. Essentially, it would use project funding to put in place the necessary components for sustainable management of the biodiversity resources of Dibeen Forest.

The Forest Park was to span five local government municipalities, creating the first regionally developed and administered conservation area in Jordan that would give emphasis to land use zoning schemes tied to socio-economic initiatives based upon tourism and recreation to support both conservation and social needs.

The Project Document lists the project's Objective as being:

The development objective of the project is to establish a nature reserve in Dibeen Forest to conserve unique and globally significant biodiversity, develop sustainable alternative economic uses of the forest resources in the context of a regional forest park, and build in-country capacity in forest management and conservation-orientated land use planning.

The project's outputs are listed as:

- Output 1: Designated and established nature reserve within the Regional Forest Park
- Output 2: Biodiversity inventory and socio-economic profile
- Output 3: Prepared and implemented conservation management and eco-tourism development plan
- Output 4: Competent and effective reserve and forest park management team
- Output 5: Land use plan for Regional Forest Park
- Output 6: Socio-economic programme for local communities
- Output 7: Implemented awareness and outreach program

The Dibeen Project is operating in a policy framework that includes, *inter alia*:

- Convention on Biological Diversity (CBD)
- Biodiversity Country Study
- National Environmental Strategy
- National Environment Action Plan (NEAP)
- Jordan National Biodiversity Strategy and Action Plan (NJBSAP)
- Jordan Agenda 21
- Enhanced Productivity Programme
- Environmental Law (1996, 2003 & 2005)

Therefore the resulting Project Document developed the rationale for the Dibeen Project, set the DNR within the context of the larger Regional Forest Park, developed seven *outputs* to guide project implementation and set out the modalities for project execution.

The Delegation of Authority was given on the 17th June 2003. All parties signed the Project Document by August 2003. However, the project did not start-up officially until January 2004¹⁰ for a period of 4 years giving an end date of December 2007.

The Inception Workshop was held on the 18th January 2004 and the final draft of the Inception Report was submitted on the 5th March 2004 and the Project Manager was recruited in March 2004.

In response to a changes in GEF "Strategic Priorities"¹¹ introduced as part of the GEF policy changes demanded by GEF donors during the GEF-3 replenishment negotiations a project log frame matrix with indicators was retrofitted to the project document during the Inception Phase in January 2004¹². Therefore the main

¹⁰ The FE draws no conclusion from this delay which is not unusual and is noted here as a matter of record.

¹¹ All projects in GEF-3 were required to fit within the new Strategic Priorities (the 2 main SPs for Biodiversity were "strengthening protected area systems" and "mainstreaming biodiversity into productive landscapes/sectors"). It was decreed that projects already approved but with more than 2 years of implementation remaining should also be retrofitted to be in-line with the Strategic Priorities. Hence the Dibeen MSP was scheduled to be "retrofitted".

¹² Retrofiting GEF projects to measure the impact of the biodiversity portfolio
Lamia Mansour, Acting Regional Biodiversity Coordinator, GEF RCU-AS, 9 January 2004

objectives of GEF retrofitting mission was to produce a new project log frame that was in-line with the new GEF Strategic Priorities and was updated to refer to the *Goal, Objectives, and Outcomes* hierarchy logic. It was not a normal Inception Mission in that its objectives were not specifically to look at the changes in situation, risks and assumptions since the project was already developed¹³.

Project implementation is through the UNDP Country Office (UNDP CO) and project execution is through National Non-Governmental Organisation Execution and the designated National Coordinating Agency is the Ministry of Planning and International Cooperation (MoPIC).

2.1.3 Description of the Dibe'en Project

As noted above, the Project *Objective* is to establish a nature reserve in Dibe'en Forest to conserve unique and globally significant biodiversity, develop sustainable alternative economic uses of the forest resources in the context of a regional forest park, and build in-country capacity in forest management and conservation-orientated land use planning.

The Project Document envisaged seven *outputs*:

- Output 1: Designated and established nature reserve within the Regional Forest Park
- Output 2: Biodiversity inventory and socio-economic profile
- Output 3: Prepared and implemented conservation management and eco-tourism development plan
- Output 4: Competent and effective reserve and forest park management team
- Output 5: Land use plan for Regional Forest Park
- Output 6: Socio-economic programme for local communities
- Output 7: Implemented awareness and outreach program

The total budget is:

GEF and UNDP inputs		
GEF	US\$	1,000,000
UNDP/TRAC	US\$	100,000
Subtotal	US\$	1,100,000
Others		
Local Counterparts (in kind)	US\$	203,000
RSCN (in kind)	US\$	400,000
EU funding (parallel)	US\$	317,000
Subtotal	US\$	920,000
Project Total	US\$	2,020,000

All parties signed the Project Document by August 2003. The first budget revision was submitted in November 2003 and the first Annual Work Plan generated from ATLAS was submitted in February 2004 following the Inception Phase in line with the change of 7 project Outputs to 3 Outcomes. The Project is currently implementing AWP 4. At June 2007, the first half of AWP 4, the budget execution is US\$ 887,574

¹³ Tim Clairs, Pers. Comm.

(80.7%) disaggregated as US\$ 787,574 (78.7%) GEF inputs and US\$ 100,000 (100%) UNDP CO TRAC funds. In-kind contributions from RSCN amounted to US\$ 500,000 by December 31st 2006 and are expected to reach US\$ 600,000 by the end of the project. Parallel funding from the EU LIFE Programme did not materialise because the project to support the Regional Forest Park was abandoned in early 2004.

2.1.4 Inception Phase

The inception phase is an opportunity to consolidate the planning team, to define the current and near-future status of the project, to discuss and review the project strategy with stakeholders, refine the project log frame, put in place the necessary logistics, and develop the first Annual Work Plan (AWP)¹⁴. The major output of the inception phase should be the Inception Report (IR)¹⁵ and the first AWP, which, on agreement with the Steering Committee, UNDP CO and GEF, will form a necessary flexible basis for implementation. At the time that the Dibeen Project was being developed (during the time that the Project Documentation was being formulated) it was not mandatory for UNDP-GEF projects to produce a Project Logical Framework Matrix (LFM)¹⁶.

However, in response to the changes in GEF “Strategic Priorities” and the adoption of the Atlas Reporting System that were taking place at that time, the 7 Outputs described in the Project Document were retrofitted to a log frame matrix.

During this process the *Goal*, *Objective* and 3 *Outcomes* with 7 *Outputs* were developed and the project log frame was expressed:

Project Goal – To conserve globally significant forest biodiversity in (the) North of Jordan.

Development Objective – The development of the project is to establish a nature reserve in Dibeen Forest to conserve unique and globally significant Biodiversity, develop sustainable alternative economic uses of the forest resources in the context of a regional forest park, and build in-country capacity in forest management and conservation-orientated land use planning.

Outcome 1 – Aleppo pine forest conserved through the establishment of the Dibeen Nature Reserve within the context of a regional park approach

Outcome 2 – Sustainable economic uses developed for the forest

¹⁴ The Inception Report will include a more detailed narrative on the institutional roles, responsibilities, coordinating actions and feedback mechanisms of project related partners. In addition, a section will be included on progress to date on project establishment and start-up activities and an update of any changed external conditions that may effect project implementation. Annex II Sample M&E Plan and Budget for FSP and MSP, UNDP Handbook, Monitoring & Evaluation.

¹⁵ Under the Result-Based Management System a LFM, whether there have been revisions or not, should be included in the Inception Report and should be considered a contractual document upon which future evaluations will take place.

¹⁶ Under the existing Result-Based Management System used by UNDP/GEF a LFM is a requirement.

Outcome 3 – *A national pool of qualified personal in conservation orientated forest management*

Essentially the retrofitted LFM did not lose any of the components (7 *Outputs*) originally described within the Project Document, rather it arranged them more effectively to demonstrate what outcomes could be expected from the project's interventions. The LFM followed the GEF format (*Outcome, Outputs, Indicators, Source of Verification and Risks and Assumptions*) but it did not include *targets*. This resulted in some weaknesses in the LF in targets and indicators being combined, and particularly, the identification of risks and assumptions that could have been detected when the Inception Report was submitted to the UNDP CO¹⁷. Therefore, these weaknesses were mostly in the confusion of targets and indicators and the development of the risks and assumptions and it is the latter that are of particular concern relating to any adaptive management approach by the project. Furthermore, the LFM could have added two more Outcomes, concerning the establishment of alternative livelihoods and resource replacement to reflect the inherent differences between *sustainable use* and *alternative livelihoods* and a general Outcome of *Learning, evaluation, and adaptive management increased* to ensure that the project followed an adaptive management approach.

It is necessary to understand that the Inception Phase is an important point in the critical path of the project when changes can be made to the LFM and that any changes to the project documentation should be accompanied by a rationale or justification explaining how they enhance the project strategy for achieving the project's *Objective*, or even changing the *Objective* if necessary. No such justification was included in the Inception Report and the FE therefore considers that the Inception Phase and corresponding Report represent a considerable weakness in the project cycle.

While these matters might have been detected through the project assurance or even by GEF in New York, it is not unreasonable for an Executing Agency to familiarise itself with log frame planning and the role of monitoring and evaluation, particularly as it relates to adaptive management. After all, log frame planning, at the time the Dibein Project was being developed was in widespread use in many projects and with many donor agencies.

2.1.5 The Dibein Project Post Inception Phase

The project's strategy emerged relatively unchanged from the inception phase; all components had been carried over to the new retrofitted log frame matrix. The threat analysis developed in the Project Document had survived unchanged and the risks and assumptions upon which the project had been designed remained the same. Importantly, there was no discussion about adaptive management, in as much as the

¹⁷ However, the retrofitting mission was led by a UNDP-GEF Technical Advisor from New York and the Acting Regional Coordinator, the UNDP CO therefore, is unlikely to question the Log Frame. It is not submitted to the Regional Coordination Unit. Therefore, the next level where this might be detected is the UNDP-GEF Principal Technical Advisor based in New York and the direct supervisor of both the Technical Advisor and the Regional Coordinator.

inception phase gives an important opportunity to revisit the rationale and challenge the assumptions on which it is founded and adapt the strategy and interventions, if necessary.

2.2 METHODOLOGY OF THE EVALUATION

The FE provides evidence-based information that is credible, reliable and useful. It must be clearly understood by project partners and applicable to the remaining period. The FE was carried out in line with GEF principles on:

- Independence
- Impartiality
- Transparency
- Disclosure
- Ethical
- Partnership
- Competencies and Capacities
- Credibility
- Utility

The FE has provided disaggregated data where possible, particularly with regard to gender.

The FE was carried out by a Team of two external evaluators, independent from both the policy-making process and the delivery and management of assistance. The ToR for the evaluators is provided in Annex 1 and a brief *Curriculum Vitae* is given in Annex 5.

The *combined* national and international technical assistance input of the FE consisted of 9 days desktop study of available project documentation, 24 days in country consisting of field trips, interviews, meetings etc., 12 days for analysis and report writing and 4 days to incorporate corrections, comments and suggestions.

The FE's understanding of the project is based upon the history of the project cycle as it is represented in the project documentation and interviews with the various stakeholders and analysis of the project's *strategy, objective, outcomes, outputs* and *activities* as well as external events and circumstances that might have impacted on the project.

The FE has reviewed the project's performance over its lifetime. It has considered what has been the impact of the project and how has it contributed to the GEF objectives. Therefore the FE has:

- Assessed the effectiveness of the individual *activities* (monitoring performance);
- Assessed the effectiveness of the various activities in achieving the *Outcome* (monitoring the impact), and;
- Assessed the effectiveness of the various *Outcomes* on achieving the *Objective* (monitoring the change).

The analysis of this has allowed the FE to comment on the:

- Implementation – did the project do what it planned to do (i.e. is the plan still untested because the implementation was poor);
- Effectiveness – did the plan meet the predicted objectives (i.e. has the plan been tested and found to have flaws), and;
- Validation of the strategy's parameters and relationships (i.e. which assumptions, variables and interactions were correct).

The evaluation will include ratings on the following aspects: (1) Sustainability; (2) Outcome/Achievement of objectives (the extent to which the project's environmental and development objectives were achieved); (3) Implementation Approach; (4) Stakeholder Participation/Public Involvement; and (5) Monitoring & Evaluation. The evaluators should use a six values rating system (High Satisfactory – HS, Satisfactory – S, Moderately Satisfactory, MS, Moderately Unsatisfactory – MS, Unsatisfactory U, Highly Unsatisfactory HU).

3.0 FINDINGS AND EVALUATION OUTCOMES

The FE recognises the dedicated commitment and efforts of the Implementing Agency and the Executing Agency in their achievements so far. The project has had a number of successes and it is important that these are recognised. The project has demonstrated that the Executing Agency can produce results when there is a clear pathway. The internal strengths of RSCN and its strong corporate identity and evident capacities and institutional self-confidence have been a major contributing factor to developing the DNR, including the role of RSCN in the campaign against the change in Forestry Law – a change that if it had happened would have spelt the end of the project and Dibeen's globally significant biodiversity. However, the creation of DNR may have been the single most important outcome of the project, but to achieve this required a number of interventions in the strategy that had to fall into place. When some of these did not occur, the absence of an adaptive management framework has meant that those affected result areas have not performed well and the sustainability of DNR is uncertain.

There have been no revisions to the project LFM despite significant situational changes encountered by the project over its lifetime. Indeed, the quarterly and annual reports have been based upon the 7 *Outputs* rather than the 3 *Outcomes* suggesting that the project is focusing on delivering a number of specific products (DNR, Technical Reports, a pottery, a mushroom farm, etc.), rather than addressing the issues of embedding DNR within the local democratic institutions, related government agencies and informal social structures. This has affected the projects ability to link activities with outcomes and progress towards the project objective.

Despite the success in establishing DNR, weak project management (e.g. 4 Project Managers) has affected the progress of the project. The project has had 4 Project Managers in the first two years raising concerns about continuity of project outcomes. Furthermore, the project has failed to establish the necessary cordial relationship with UNDP as the Implementing Agency.

The FE reiterates concerns that were raised during the MTE of the sequencing of project activities, that is, certain activities such as the socio-economic study should have been implemented concurrently rather than consecutively and have impacted negatively upon the opportunity to trial interventions within the framework of a funded project.

The FE recognises that the Implementing Agency has tried to exert a reasonable project assurance role in the project¹⁸ and has met with considerable resistance from the Executing Agency. The Implementing Agency has on numerous occasions correctly tried to address these issues and has met with some resistance from the Executing Agency. For the avoidance of doubt, the FE does not consider that the Implementing Agency has been “micro-managing” the project as has been suggested in the past by the Executing Agency¹⁹.

2.3 PROGRESS TOWARDS EXPECTED RESULTS

As stated earlier, the project has had a number of remarkable successes, most notably the establishment of DNR and the management of visitors within the protected area.

But, the project design – *Objective, Outcomes, Outputs and Activities* does not provide a convincing relationship between project expenditure and outcomes. The FE questions the connection between cause (or *intervention*) and effect, and is not convinced that, the approaches developed in the Project Document and the implementation of those interventions on the ground (as they manifest themselves in the project) are a cost effective investment for UNDP and GEF funds in order to have an impact on globally significant biodiversity.

Furthermore, as the UNDP-GEF funded project support draws to a close there are concerns about the sustainability of the project’s achievements. The FE is concerned, in order of priority, that:

- DNR is not biologically sustainable as it relates to the wider GEF objective of the conservation of biological diversity. The shape and fragmentation of the protected area combined with its size (8.5sq. km) exposes it to a number of risks and could result in a slow but inevitable loss of its biological diversity because the project has not put in place the necessary safeguards in terms of the risks faced by the biodiversity – especially fragmentation, ecosystem viability, impacts of edge effects, encroachment, neighbouring development, the management practices in the surrounding forest and a failure to link wise management to reward;

¹⁸ For instance, three additional risks, namely; the redevelopment of SSC land, change in current legislation pertaining to forest and reserved areas and the socio-economic programmes meeting local community expectations were identified in the UNDP-GEF RTA’s mission in Feb 2006 and again in the MTE without adequate response from the Executing Agency with regards to a systemic approach outside the immediate boundary of DNR and the socio-economic programme although the implementing Agency prepared the Management Response to the Risks and updated them on ATLAS systematically.

¹⁹ Conservation and Sustainable Use of Biodiversity in the Dibeen Nature Reserve Project, Mid-Term Evaluation, Final Report, November 2006. P 32

- DNR is not, in its current form, institutionally sustainable. While the management (RSCN) has cordial relations with a number of local stakeholders the project has failed to embed DNR within the local institutional framework. Key partners (e.g. the Forestry Department) in the local management of forest resources have been, to a large extent, excluded by RSCN as the project executors. Furthermore, the FE is concerned that local support may be grounded in expectations that, however sincere RSCN is in meeting these, may, in fact, not be achievable given the present socio-economic programme. DNR has to be placed in the context of a multiplicity of authorities and tenurial systems. Any attempt to isolate the 8.5 sq. km of DNR from these *de jure* authorities and *de facto* responsibilities is likely to ignore fragmentation, risk ecosystem viability, increase the impacts of edge effects and encroachment, ignore neighbouring development and the management practices in the surrounding forest are unlikely to create the linkages between wise management and reward. In the Dibeen Forest situation other institutions involved in land management *cannot* be isolated or excluded, they *must* be involved, and;
- DNR may not be economically sustainable particularly given the concerns about biological and institutional sustainability. A failure to address these issues could result in increased conflict with stakeholders or neighbors that would increase management costs. Furthermore, the FE considers that the strategy of developing alternative livelihoods as a mechanism to reduce resource dependency carries a number of risks and assumptions. On its own, such a strategy will not internalize the costs and benefits, produce the linkages between authority and responsibility and address the issues of pricing and tenure at a functionally efficient level. This can only be achieved in the context of an ecosystem wide (the larger Dibeen Forest) systemic approach that includes the sustainable utilization of the full range of forest products and ecosystem services.

Therefore, with the UNDP-GEF funded project closing in December 2007 the FE concludes that there are genuine worries about sustainability:

- At the level of the ecosystem;
- At the institutional level, and;
- The economic sustainability raises a number of questions that need to be addressed.

However, the unique situation²⁰ of RSCN and its demonstrated track record have given the FE a degree of confidence that, providing the recommendations made in this evaluation are quickly followed up prior to the project ending in December 2007, these issues can be addressed in the remaining life of the UNDP-GEF project. The

²⁰ RSCN is a non-governmental organisation with charitable status. However, Government has given the organisation the statutory role to establish and manage protected areas and enforce wildlife protection laws in Jordan. This allows the organisation to police these areas and to raise revenues from visitor entrance and tourism facilities. The organisation itself has considerable capacities and is well respected within the region having produced a high calibre of staff, many of which are now employed outside the organisation. Furthermore, RSCN, as a result of sound financial management and fund raising has considerable resources at its disposal.

DNR will be absorbed into RSCN's reserve management section and staff will be employed by RSCN ensuring that there is continuity that must be recognised as a strength of this particular National NGO Execution Modality, but continuity of the reserve management and reserve financing is not the same as sustainability as it relates to the GEF objective.

Overall project implementation has suffered as a result in the high turnover in Project Managers in the first year and the failure to start components such as the socio-economic survey earlier in the project cycle. Furthermore, the FE notes that this project required a substantial project coordinator or management role. As the project cycle progressed the initial strategies and various outcomes appear to have become less emphasised in favour of a small number of discrete outputs or deliverables, for instance, establishment of DNR, visitor management and the fast track SMEs. The wider issues relating to land use and sustainable utilisation of forest resources, building the capacity for forest biodiversity management across a range of institutions (mainstreaming biodiversity), etc. appear to have become less important²¹. But the Project Document makes it very clear that this project was going to require some new, and as yet, undeveloped approaches in order to manage 8.5 sq. km of DNR at an ecosystem level.

Despite showing considerable adaptation in dealing with the issues of visitor management, when it came to influencing other institutions or influencing the process of land use beyond an area immediately controlled by the project, there has been limited success.

An overview of the project as required by the ToR is given in sections 3.1.1 to 3.1.5. The specific outputs are dealt with in detail in sections 3.1.6 to 3.1.8.

Based upon the findings of the FE the project is given the following ratings:

- Sustainability – Moderately Satisfactory
- Outcome/Achievement of objectives – Moderately Satisfactory
- Implementation Approach – Moderately Satisfactory
 - Implementation Approach to DNR – Satisfactory
 - Implementation Approach to establishing DNR and the visitor management – Satisfactory
 - Implementation Approach to establishing DNR within the larger Dibeem Forest – Unsatisfactory
 - Implementation Approach to socio-economic programme – Moderately Satisfactory
 - Implementation Approach to sustainable utilization of forest resources - Unsatisfactory
- Stakeholder Participation – Moderately Unsatisfactory

²¹ The FE recognises that the EU-LIFE RFP project would also have contributed significantly to this and therefore it is reasonable to have expected this project to have responded to the collapse of the RFP project by developing strategies that might have “taken up” some of these activities using the US\$40,000 allocated for the integration with the RFP (e.g. through even greater involvement of the FD), however, the collapse of the RFP appears to have passed without any substantive project response.

- Monitoring and Evaluation – Moderately Satisfactory

2.3.1 Changes in Development Conditions

The Dibeen Project has considerable support amongst many of the local stakeholders at the Governorate and Municipal level as well as those who are involved in the projects activities. However, the FE is concerned that local support may be grounded in expectations that, however sincere RSCN is in meeting these, may, in fact, not be achievable given the present socio-economic programme²². The FE bases this conclusion on a number of arguments. Firstly, there is the sheer weight of numbers, with 23,000 refugees and DPPs in Ghaza Camp and 11,000 villagers in the two closest settlements to the DNR placing considerable pressure on the ecosystem to meet current livelihoods, let alone the development aspirations of those people. The large population of the area will put considerable pressures on the natural values of the Dibeen ecosystem. Any attempt to meet these pressures with simple prohibition measures is likely to result in conflict. Secondly, the recent socio-economic survey and the establishment of the three fast track SMEs has resulted in considerable support but this must be set against the possible direct social and economic benefits that DNR can provide to local communities on a much greater magnitude in the future.

The FE questions the RSCN's "alternative livelihood trade-offs"²³ approach on a number of levels:

- There are concerns about its sustainability because it creates a dependency upon the payments, which may be subject to the vagaries of external events; indeed they are tied to the future successes of Wild Jordan²⁴ and not necessarily DNR and there is little consideration for local entrepreneurial

²² The socio-economic survey and the project's "fast track" socio-economic programme are relative recent developments over the last year. The support by local stakeholders for these interventions could be the result of raised expectations in an area that has seen little outside intervention in the development process to date and therefore the FE was present during a "honeymoon" period. The FE questions the effectiveness in the creation of 9 jobs in the "fast track" programme, 14 jobs in the reserve and a number (5 - 20) of part-time jobs on Fridays in the DNR in either absorbing the opportunity costs of greater protection or deflecting the pressure of forest resource dependency in a minimum local population of 34,000 residents.

²³ The "alternative livelihood trade-offs" approach, as understood by the FE requires a contract with local people that, in the event that they desist from livelihood activities that damage the specific natural values of an area, other forms of livelihood will be provided such as embroidery, pottery and the production of exotic oyster mushrooms – the *quid pro quo* of the trade off. While there is some merit to support this approach it could also be argued that the majority of Dibeen Forest is a mixture of state, private and common property resources. In this instance, the alternative livelihoods approach could be presented as, the appropriation of a common property resource by a single owner and the conditional provision of employment or contractual access to some members of the commonage. While this might work in the lesser area of DNR and is certainly proving effective for visitor management in DNR, it is hard to see that it will have sufficient impact across the larger Dibeen Forest ecosystem.

²⁴ Wild Jordan is part of the RSCN and the trading name for the Society's eco-tourism and handicraft enterprises. See <http://www.rscn.org.jo>

skills. An example of this is found in the projects approach to honey production. The socio-economic programme found that honey production was not economically feasible and Wild Jordan is considering honey production in Mujib Nature Reserve. However, the FE saw evidence of local farmers keeping bee hives in their gardens and were informed that these farmers also collected wild bee swarms from the forest to start new colonies or replace old colonies. Therefore, the FE challenges the assumption that honey production is “uneconomical”. Perhaps in the mould of the socio-economic programmes enterprises with a centralised retail system and satellite production units it is uneconomical. But, there is evidently a market locally and bees, honey, and bee’s wax could be considered one of the natural values of the forest that could be a tangible economic incentive for conservation management.

- There are unanswered questions regarding the ethical implications of such direct payments. For instance, would an employee be dismissed because they were involved in an illegal or legal activity that damaged the natural values of DNR or the larger Dibeen Forest or could they be penalized if a close member of their family was involved in activities that RSCN considered inappropriate. What would be their protection under existing or future national labor laws?
- Negative payments, paying people not to do something, are on the whole less successful than positive payments. For instance in the UK it was demonstrated that paying farmers compensatory payments for areas of farmland that were taken out of production because they were designated Sites of Special Scientific Interest were deeply unpopular with rural people who had a strong ethic of being custodians of the country side. Under national reforms and reform of the European Union Common Agricultural Policy such compensatory payments have been turned into positive payments as agreed Management Contracts for the sites, often with a public access function to sites on private land.
- A systemic approach to land management needs to be functionally efficient, that is, it must internalize the costs and benefits, authority and responsibility as much as practicable within a single unit of management or at the ecosystem level.
- There has been no financial analysis of the possible opportunity costs and the magnitude of benefit from the alternative livelihoods and the FE has to question the extent to which three SMEs can provide livelihoods for the large number of people who are still dependent to varying extents upon the natural values of Dibeen Forest²⁵.

However, the FE accepts that the project was correct in trialing this approach but it has serious concerns that this was, effectively, the only approach.

Nationally, the project has raised the profile of Dibeen Forest and this has had a number of implications that RSCN, as the Executing Agency can rightfully claim credit for. The benefits of this has been highlighting the issue over the Social Security Corporation land and the proposed Jordan-Dubai Capital development (see Annex 10) as well as the successful lobbying campaign against changes to the National Forest Laws.

²⁵ The FE considers that the annually large number of convictions cited in the Socio-economic Study is a measure of this dependency upon the forests resources

RSCN has been involved in two initiatives related to land use planning at the national level, both of which will support DNR in the future. These are the *Municipal Plan* for land use and the *Special Areas Initiative (Kings Initiative)*. The FE has not been able to study either of these initiatives²⁶. But, the FE understands that both initiatives are directly addressing land use as it relates to the environment. Furthermore, the FE's understanding is that they are essentially area-based plans with limitations on development in sensitive areas and as such will not fully address the issues of costs and benefits, responsibility and authority, and pricing and tenure in a functionally efficient unit at the ecosystem level. In other words they prohibit or permit various activities at specific sites. While this a positive development the project was originally designed to develop a system that allowed for sustainable use of the forest resources²⁷ that not only delineated land but put in place the mechanisms that allowed the areas to remain economically active while still providing biodiversity and environmental gains.

The project has very successfully created DNR in as much as the reserve has been gazetted in 2004 and a management team has been put in place. Considerable work has been carried out to ensure that visitors are managed in a manner that promotes biodiversity and that the environment is kept clean. Furthermore, the project has successfully established the concept of paying for the services provided by DNR through the gate entry fee.

Therefore, DNR has been established and the RSCN will ensure financial continuity to the management. But, this was not the project's *Objective* and it remains to be demonstrated that DNR in itself will conserve unique and globally significant biodiversity or the project has developed sustainable alternative economic uses of the forest resources, or that the project has had a significant impact at the ecosystem level through the context of a regional forest park and that the project has built in-country capacity in forest management and conservation-orientated land use planning in any organisations other than RSCN.

2.3.2 Measurements of Change

Inter alia, the FE would normally rely upon the indicators developed in the project LFM to measure changes in the development conditions. However, as discussed earlier the *Outcomes* and the associated indicators given in the LF (Annex 6) are not necessarily indicative of change as it relates to the GEF Objective; indeed some might be considered targets. This stated, the FE *might* consider such indicators as:

Outcome 1: Aleppo pine forest conserved through the establishment of the DNR within the context of a regional forest park:

- Dibeen forest functionally efficient at the ecosystem level.
- Annual application of GEF Threat Reduction Analysis Tool at the level of DNR and the level of Dibeen Forest.

²⁶ The FE accepts that both initiatives or plans are still at the consultation phase and therefore not widely available for circulation or citation

²⁷ An operating system similar to MS Windows but more democratic and user-friendly

- Enabling environment for conservation and natural resource management.

Outcome 2: Sustainable economic uses developed for the forest:

- Formalised natural resource management systems in place in the greater Dibeen Forest area for state, private land and land with existing *de jure* or *de facto* rights of access to forest resources.
- Awareness of forest and natural values at local and national level.
- Use of any species or habitat does not exceed acceptable limits.
- Pressure on target resources reduced through the utilisation of alternatives.

Outcome 3: A national pool of qualified personnel in conservation orientated forest management:

- Capacity of national and local institutions to manage forests for biodiversity protection and utilitarian values.

While these may not necessarily have been achievable in the project's lifetime, specific targets were and, others could, have been set. These might have been:

- Gazetting of DNR.
- Other policies and laws relating to forest conservation and use.
- Creation of a single cohesive unit of management for the entire forest.
- Master Plan or *common vision* amongst key stakeholders for the RFP.
- Agreed systems of collective or private management for various forest resources.
- Dibeen Forest linked to regional tourism marketing plans at the level of the Governorate.
- Marketing plan for forest products.
- Increased levels of awareness.
- A percentage decrease in the level of threats identified by the TRA tool.
- Agreed number of SMEs established for resource users engaged in activities causing damage to key forest resources or alternative resources replace specific forest resource dependency (e.g. solar heaters, etc.).

The above indicators and targets might reasonably have been developed from the espoused strategy in the Project Document (see section 3.1.3 for a discussion on the project strategy). However, the project has not pursued a number of themes that were part of the original logic of the UNDEP-GEF funded intervention. Most significantly these are, the larger regional forest park approach and the development of forest resource-based economic activities. The FE notes the striking absence of any activities that place the forest resources within the local economic framework (other than tourism) and considers that the removal of financial or economic values from natural resources carries considerable risks²⁸.

²⁸ Resource replacement and alternative livelihoods could alter the relative values of the forest resources *in situ*. Use may, and often does, improve the status of the used population. This is the basis of the argument for *use* as a conservation tool and the argument carries the corollary that *non-use* is the risky option. The precautionary principle should be applied in this sense: it is risky

In sum, the project has made significant progress in as much as DNR has been established as a functioning protected area and there has been progress on the enabling environment as it relates to *protection* of these resources (National Forest Law, the *Municipal Plan* for land use and the *Special Areas Initiative (Kings Initiative)*). Awareness of DNR appears to be high within the local community, Municipality, Governorate and nationally. But, the long-term security of the biodiversity resources (the GEF strategic objective) is far from certain and it can be argued that protection is often less cost-effective than utilisation, particularly when there are a multiplicity of tenure systems operating on the ground (see Annex 9 Protection, Utilisation and Abandonment).

2.3.3 Project Strategy

The Project Document set out a reasonable strategy to address the threats to biodiversity in the Dibeem Forest in as much as it involved the following:

- The protection of a core area;
- The development of a larger forest park to support this and secure the biodiversity resources at the level of the ecosystem;
- Participation of local agencies (including building capacity) involved in forest management, local democratic institutions, and local communities as identified in a socio-economic study;
- The development of local enterprises based upon the sustainable use of forest resources;
- The development of alternative livelihoods in order to reduce dependency upon forest resources, and;
- Raising awareness amongst stakeholders.

This strategy was a well-rounded plan that broadly addressed the apparent threats to biodiversity in Dibeem Forest and as the basis for a plan of action seems likely to have made considerable progress towards achieving the project's *Objective*. Furthermore, the strategy included a number of components; *inter alia* – *protection, sustainable utilisation, alternative livelihoods and resource replacement*.

This strategy survived through to the post inception phase and was further articulated in the retrofitted log frame matrix and effectively remains the strategy for the project, as there have been no revisions to the log frame.

However, through a gradual process of attrition some key components have been dropped from the strategy replacing it with an approach that, as the FE understands it, more closely resembles the approach that RSCN has taken in other protected areas. While it is possible for a project to do this, there is an obligation on the project management (in this case the Executing Agency) to pause, fully develop the *new* strategy, refit the log frame and identify the risks and assumptions. It is not sufficient to make such major changes to the project's strategy through quarterly reports or other communications with the Implementing Agency. For the avoidance of doubt,

not to use resources – therefore we should use them (SASUG, IUCN Species Survival Committee, Sustainable Use Issues and Principles).

the communication of these changes *and* the refitting of the project LFM, complete with indicators, identified risks, assumptions and proposed reassignments of budgets is essentially the responsibility of the Executing Agency.

The current project strategy appears to be:

- Establishing the core area as a recognisable protected area;
- Focusing on the apparent most immediate threat (massive visitor pressure);
- Develop the capacity of the Executing Agency;
- Develop new alternative sources of livelihood for some local people who agree to stop any livelihood activities that involve damage to, or extraction of forest resources within the core area, and;
- Raising awareness amongst stakeholders.

With no agreed revision of the project's strategy it cannot be considered an adaptive management approach but *might* appear to be more in the interests of project expedience. It is not clear to the FE whether the Executing Agency is very confident in its approach, as it has been apparently tried and tested in other protected areas, *or* when faced with the issues and challenges identified in the project document, the project merely retrenched to areas where it was familiar rather than looking for new and innovative solutions²⁹.

2.3.4 Sustainability

The issues of sustainability of the projects objective have been discussed in some detail earlier. In this section more specific indicators of sustainability are examined. In this context, sustainability is a measure of the extent to which benefits continue, within or outside the project domain after the GEF assistance has come to an end.

As stated earlier, the unique situation of RSCN and its demonstrated track record have given the FE a degree of confidence that there will be continuity after the UNDP-GEF investment ends in December 2007. However, continuity of management and reserve financing is not the same as sustainability as it relates to the GEF objective. The sustainability of the project can be measured against the following criteria:

- Development and implementation of a sustainability strategy.
 - The FE is confident that RSCN can maintain the financial sustainability of DNR into the foreseeable future; furthermore, RSCN's commitment to maintaining the management of DNR is unquestionable. However, sustainability cannot be defined in these narrow terms, or even in ecological terms. In the situation of DNR it is necessary to ensure sustainability within the ecological, economic, political and social arenas. In general a process will not be sustainable unless it satisfies certain conditions in these four realms³⁰. At present the Dibeen Project and DNR have a commitment from RSCN, which the FE believes, is very genuine. However, financial sustainability is

²⁹ The FE recognises that this is not the case with the visitor management where the project was quick to adapt its approach to the unforeseen volume of weekend visitors

³⁰ SASUG, IUCN Species Survival Committee, Sustainable Use Issues and Principles.

different from economic, social or biological sustainability, and is more vulnerable to externalities.

- Establishment of the financial and economic instruments and mechanisms to ensure the ongoing flow of benefits once the GEF assistance ends (from the public and private sectors, income generating activities, and market transformations to promote the project's objectives).
 - In addition to the issues outline above, the FE questions the "alternative livelihood trade-offs" approach of RSCN particularly as it relates to social and economic sustainability. It is one approach, however, in a situation where so many "local people" might rely on the natural values of Dibeen Forest, as a single approach, it carries a high risk.
 - Arguably RSCN has appropriated the most important part of the Dibeen Forest to manage for biodiversity. While there is nothing wrong with this, indeed RSCN has such a mandate from the State³¹ in the case of DNR there are considerable opportunity costs involved for those who are closest to the resource. Local support is only likely to continue if benefits are seen to continue to flow from the DNR. However, small sites like DNR are likely to incur considerable management costs – they are expensive to run – and income generated from the NR will need to be used to recover those costs. Furthermore, the continuous development of DNR is heavily dependent upon utilising the forest areas outside of the NR. This will require new and as yet untested financial and economic instruments and mechanisms to ensure the ongoing flow of benefits.
 - The Project Document made a vague commitment to "explore the creation of a community social fund, which could be used to support social needs, as identified by the communities themselves, such as school and hospital equipment, local bus services or revolving loans for micro-enterprises. The fund would receive a percentage of the surplus (e.g. 20%) to create a capital base, which could then be invested and distributed for agreed priority projects according to formalised procedures". DNR currently generates approximate JD20,000 and the management costs (without capital investments) is approximately JD80,000. There are a number of points to be made on this. Firstly, very few protected areas are fortunate enough to break even, let alone generate profit, secondly "profit" or "surplus" can be easily hidden through numerous ways (for instance investing in capital projects) making it something of an empty commitment³² and thirdly, it is unlikely that DNR will generate significant income through services that the management can charge for. However, the total economic value of DNR is likely to be much higher than this through generating economic activity locally (for instance souvenirs, services to day visitors, etc.). Therefore, it is important to focus on the latter rather than setting the very high and possibly unachievable goal of turning a profit from the reserve itself.

³¹ The Environmental Law (2003) mandated RSCN to run protected areas in Jordan on behalf of the State

³² A more usual concessional arrangement is to have a fixed fee and then a sliding % rate on bed nights or person/days etc.

- Development of suitable organizational arrangements by public and/or private sector.
 - The project has not embedded the outcomes at a local level within the existing organisational arrangements. DNR could become a stand alone protected area disconnected from the larger ecosystem and hence the external threats to the natural values and biodiversity resources are likely to increase over time. The FE considers that there is a risk that new systems are being imposed upon existing formal and informal systems without consideration of the possible opportunities to co-opt these to develop biodiversity benefits³³.
- Development of policy and regulatory frameworks that further the project objectives.
 - The project and RSCN as an institution has very effectively lobbied to defend and develop laws that protect the environment. But it is not clear how the project has addressed the issues of sustainable utilisation of biodiversity as a means to conserve it. The FE was struck by the capacity of many project personnel and it is evident that the project is thinking about these issues in a very positive way. But it remains to be seen how the project will use this human capital to drive the process of sustainable utilisation on land that is not under its discrete authority.
- Incorporation of environmental and ecological factors affecting future flow of benefits.
 - As stated earlier, the FE is not convinced that RSCN's alternative livelihood trade-offs strategy, on its own, will build the linkages between wise management of the biodiversity resources and benefit. Effective management of biodiversity is best achieved by giving it focussed value for those who live with it. The project does not appear to have balanced the simple equation – *people seek to manage the environment when the benefits of management exceed the costs*. Simply put if the income benefit from conservation management exceeds the opportunity costs of reduced harvesting, better harvesting techniques, reduced grazing or fuel wood collection, controlled honey or bee swarm collection, etc.; then people will tolerate and conserve the natural values of Dibeem Forest. If the benefits are a substantial proportion of income then people will incorporate conservation management into their conventional agriculture and land use.
- Development of appropriate institutional capacity (systems, structures, staff, expertise, etc.).
 - The RSCN has significantly contributed to the capacity to manage areas such as DNR. Important lessons regarding the management of

³³ The unit of proprietorship should be the unit of production, management and benefit. This means that the unit of decision-making must also be the same as the unit that manages and benefits. This component is fundamental to any sustainable resource management regime. However, it is recognised that due to issues of scale and the mobile nature and temporal and spatial boundaries of wildlife resources, mechanisms that allow for collective management decisions need to be used. These mechanisms generally exist within the community and need to be identified. Adapted from Murphree, M. J., Wildlife Division Support Project, CREMA Review Report No. 56. Wildlife Division of the Forestry Commission, Ghana and IUCN. October 2005

- high volume and low economic value visitors have been learned – and learned quickly.
- The project has not reached out to other agencies engaged in forest management, most notably the Forestry Department. This is critical as both organisations have a mandate to manage forests but there are significant differences in their approach. The FD is essentially managing for trees and therefore includes issues such as sanitary cleaning, disease prevention, enhancement planting, nutrient enrichment and fire prevention. Whereas, RSCN's management is much more holistic and involves managing processes at the ecosystem level considering Dibeen Forest as the sum of its biological diversity rather than a forest with trees. Greater effort could have been made to bring the two organisations together with a common vision and purpose.
 - The original regional forest park concept placed DNR in the context of the larger Dibeen Forest. It is important that the DNR is placed within the hierarchy of local government institutions, that is planning takes place at the governorate and municipal level and therefore DNR needs to be embedded at these levels if it is to take advantage of regional initiatives on issues such as tourism development.
 - Identification and involvement of champions (i.e. individuals in government and civil society who can promote sustainability of project outcomes).
 - There appears to be no shortage of support for DNR, but the FE notes that the socio-economic study was only recently carried out and the socio-economic programme of “fast track” enterprises is relatively new. Therefore, the FE tempers this statement with the caution that expectations of what these interventions can provide are very high and it is questionable whether they will meet these expectations.
 - RSCN has significant support at all levels and as an effective and efficient conservation lobby it is able to effectively influence decision makers that give the organisation considerable strengths.
 - Achieving social sustainability, for example, by mainstreaming project activities into the economy or community production activities.
 - As noted earlier, “as the project cycle progressed the initial strategies and various outcomes appear to have become less emphasised in favour of a small number of discrete outputs or deliverables, for instance, establishment of DNR, visitor management and the fast track SMEs. The wider issues relating to land use and sustainable utilisation of forest resources, building the capacity for forest biodiversity management across a range of institutions (mainstreaming biodiversity), etc. appear to have become less important. But the Project Document makes it very clear that this project was going to require some new, and as yet, undeveloped approaches in order to manage 8.5 sq. km of DNR at an ecosystem level”.
 - Achieving stakeholders' consensus regarding courses of action on project activities.
 - The FE considers that this is hard to gauge. Given that the project has not fully implemented the original strategy as articulated in the Project Document and LFM there is consensus amongst most stakeholders that

DNR should continue to be developed by RSCN³⁴ and on the whole the development of DNR is a positive development. The development of the *Municipal Plan* for land use and the *Special Areas Initiative (Kings Initiative)* are a measure of consensus on the future of the larger Dibeen Forest, however, the project has not developed a common vision of how the area could be developed in the future with biodiversity and the natural values (forest products, landscape, recreation, “naturalness”, etc.) at the heart of the development process.

2.3.5 Gender Perspective

RSCN does not have a written gender policy. However, they appear to try and keep a gender balance within the organisation with a number of high positions and advanced technical positions being held by women.

There are a number of gender issues related to the project and are expressed here as a particular concern but reflect a larger issue about the possible opportunity costs to vulnerable or more marginalized sections of the local communities. The socio-economic³⁵ study identified that 8.5% of the study sample had no livestock or agricultural land and this section comprised of female-headed households as well as wage labourers and the unemployed.

While a larger proportion of those employed in the pottery and embroidery enterprises established by the project are women, the socio-economic study has raised important questions about the dependency of people living around the reserve and the impact of excluding them from the forests resources. It is at this level that the opportunity costs of excluding people from the forest resources can be felt hardest and it is at this level that local people, particularly women with dependents, may be most vulnerable.

3.1.6 Outcome 1 Aleppo Pine Forest Conserved Through the Establishment of the DNR Within the Context of a Regional Forest Park

Outcome 1 of the Dibeen project was essentially to protect a core area by establishing a nature reserve in Dibeen Forest. Specific emphasis was placed upon the Aleppo pine forest. This component, as stated earlier was about creating a protected area and ensuring that there was sufficient habitat surrounding the core to buffer it. The establishment of DNR constitutes one of the projects' biggest successes and the FE recognizes the tremendous effort that has gone into the process of legally gazetting and setting up the nature reserve.

Baseline levels/scenario have shown that there was a continuous decline in species, habitats, and viable populations due to the increasing pressure of threats to the forest (APR/PIR 2006). The key indicators species hotspots were identified and considered in both the patrolling plan and zoning plan. The first flora monitoring program, conducted in year 4 have shown considerable improvement in the viable population of key indicator species on the two previous years.

³⁴ The Forestry Department is a notable exception and feels that the NR may be better managed by being returned to the FD. Pers. Com. Zaher Mahmoud

³⁵ Dibeen Reserve: Situation Analysis, March 2005

The boundaries have been surveyed and pillars have been installed on the ground. Mapping and boundary demarcation have established the reserve legally and on the ground with a final reserved area of 8.49 sq. km., however the FE has notes that such landmarks are not well known by the surrounding locals, and stakeholders possibly because the pillars have not yet been painted. The project management has to consider including pictures of these pillars in their awareness publications so people become familiar with such marks.

Progress was achieved with respect to the ecological baseline surveys, which have been finalised and provided a solid ground for the progress of the conservation practices. The research and monitoring plan was also drafted as an immediate next step, which in turn provided another achievement to the overall “monitoring framework”. This plan has set indicator species (i.e. stone martin) to monitor the forest health.

A zoning scheme (map) was completed and approved. The final document of zoning plan is yet to be finalised and the appropriate uses and management regimes are yet to be decided. The zoning plan, although it is a technical document, had to be prepared using a participatory approach considering the role and the expertise the other partners. Progress reports have stated that the first draft will be distributed to all stakeholders for their comments before it is finalised.

The DNR management plan does not include any mechanism for collaborative management of the resources. Apart from visitors there is no indication that there will be any collaborative extractive activities carried out in the reserve. None of the key elements of such a system – resource management methods, monitoring techniques, cost and benefit analyses, guidelines for replication, national and regional networking – was developed to any significant extent.

The FE field visits provided opportunities to hear of the positive perceptions by stakeholders of the changes in the development condition of the Dibein Forest since the projects intervention and the establishment of the DNR. The change from an unregulated, forest area tourism site to a protected nature reserve has also been recognized and accepted by the visitors of the DNR. However, these attitudes apply mostly to the control of visitors and the cleaning of the areas used by day visitors. Judging the attitudes of those sections of the community who are now excluded from the reserve through greater protective measures was more problematic. In fact the FE was told that it would be very difficult to meet these people as their activities were considered unlawful and the penalties were severe. However, the FE did manage, with the help of the project, to meet three women from the refugee camp at *Ghaza* who complained that they were now prevented from collecting dead wood from the forest and this had caused them some hardship.

The preparation of the DNR management plan has been delayed, however, the FE has seen an early first draft (in Arabic). Since only the first chapter is completed the FE could not make any meaningful comment on the document.

With the collapse of the regional forest park concept the project appears to have fallen back on the idea of a “buffer zone”. This is a matter of concern for the FE. Several

questions were raised regarding this strategic and technical point but no complete and convincing clarification was made. The management plan has to carefully consider how buffer zones should be treated, particularly in the absence of clear definition of such zone. Furthermore, such a zone may impose greater restrictions upon private properties adjoining the reserve and will have serious opportunity costs and a direct impact on many more people, quite apart from requiring a legal basis.

The absence of a clear and shared “vision” and commonly understood strategy or approach to guide the identification and implementation of project activities and how they would all fit together to achieve the objective was a common thread throughout discussions with project partners and during the field visits by the evaluation team. In particular, there are no clear strategies for:

- Guiding project field implementation;
- Address external threats to DNR;
- Strengthening the capacity of the project partners, and;
- Partnership development, including identifying and capitalizing on the strength of different partners.

The FE recognizes that the time consuming tasks necessary to establish a project as a functional entity make it difficult to commence meaningful activities early in the life of a project. Nonetheless, that the FE considers the project management unit could have been more effective in ensuring that outcome oriented activities were given a higher priority.

The current tourism carrying capacity of the DNR, according to the reserve management, is 400 families/cars. The visitors’ management plan indicated that around (50,000) visitors entered the reserve since the start of 2006 until the 1st of July 2006 and around 700 cars can enter the reserve during holidays and some weekends. The reserve management mentioned that the number of visitors can reach up to around 8,000 persons a week, 95% of this number is concentrated on Fridays.

To meet this challenge, the project has produced an informative “Visitor Management Plan of Dibeen Nature Reserve”. Section 4: *Visitor Management, Strategy and Actions* in the study described the “*management actions intended to resolve the issues and problems described in the previous sections*”. Nevertheless, the FE through the field visits has the following observations on the project’s progress towards results on the visitor’s management strategy:

- The reserve management is currently focusing in all of their discussions on reducing or limiting the number of visitors to the protected area as a long-term strategy in order to reduce the pressure on the natural resources, but the visitors’ management plan does not clearly indicate this as a strategy³⁶, it was only mentioned as part of “improve the quality of the picnic area while preventing further environmental degradation”. Furthermore, the mechanisms to implement this number reduction are not clear, although the mid-term evaluation suggested producing alternative picnic sites for

³⁶ The FE considers that this is further evidence that the project management team are developing some very good ideas but the project is failing to capture these and incorporate them through an adaptive management approach

visitors' around the DNR, but this has not been implemented or incorporated within the visitor management strategy.

- The directional or regulatory signs are still missing, except those that belong to the Ministries of Agriculture and of Tourism, most of which are in poor repair and give a confusing message about the identity of DNR.
- The reserve's tourism staff is comprised of a full-time tourism manager and 12 part-time staff acting as guides and awareness officers during the intensive visitation days. The FE suggest to intensively train and dress this staff a distinguished uniform, in order to develop a clear reserve identity and for them to appropriately meet the needs of this important role.
- The current and future tourism decisions of the reserve are made upon the expected needs of the site management. It would be advisable to also develop a 5 - 10 year business and financial plan.

Several workshops and presentations were prepared by the public awareness and educational program officer targeting the nature club coordinators in order to train them to implement the reserve educational program.

The educational trail inside the reserve was finalised. The trial signage concept was prepared, and work is ongoing to prepare the final requests for proposals to implement the trail signage system. A reserve poster has been produced. The poster concept is to show the importance of DNR, the Aleppo pine forest and its biodiversity, the important of its conservation, and the threats it is facing.

The schools' education program is in place with about 50% of estimated people from five municipalities showing an improved attitude towards nature, the project, and the reserve. There has been no specific education program for the local communities through the project; however, the RSCN national educational program targeted them. The educational and awareness program has been updated following the programme's questionnaire survey, and locals' attitudes have changed toward the reserve. Currently 99 local nature clubs are involved in the educational process, and schools have had weekly field visit. The Educational Kit is nearing completion and is expected to include: soil pH test kit, compost test, and a practical manual. The kit will be tested for its effectiveness through the educational program and school visits.

However, the FE considers that an appreciation of the importance of biodiversity and of its management requirements cannot be achieved by biodiversity-focused "awareness raising" alone. Education on these matters must be placed in a "livelihoods" context as well and, to be truly effective, must be undertaken as a partnership, with outsider experts exchanging knowledge with insider experts. The level of awareness was mixed in officials encountered. Some were very aware of the issues the project is trying to address; others were surprisingly ill informed.

3.1.7 Outcome 2 Sustainable Economic Uses Developed for the Forest

A study report on "*Pattern of Use*" was finalised on December 2006. The study aimed at targeted woodcutter groups that have the most negative impact on the reserve, in addition to assessing their needs; increase knowledge about their work, behavioural patterns, and reasons behind their adoption of such kind of illegal activities in order to

promote alternatives and environmentally friendly livelihoods³⁷. The FE reviewed the report and has noticed that among the conclusions and recommendations was the following *“The required financial help needed by the poor woodcutters may be beyond the capability of RSCN’s socio-economic projects and could cover small percentage from this target group, this requires: 1) to be very selective in the employment process, 2) a strong fund raising role by RSCN and 3) building the capacities of the local NGO’s”*

The project has organised two training workshops with local communities that have resulted in the submission of five proposals to the UNDP SGP in April/May 2007 as well as organizing an open day where local community representatives were able to display their products to sell. However, the FE considers that there was relatively little effort made for the last recommendation, and there was a lack of a clear strategy or plan to address this issue. Furthermore, in light of the concerns over the single intervention of alternative livelihoods, the cost-effectiveness of an alternative livelihoods approach and the issue of the ecology of Aleppo pine forest, the FE considers that this requires further analysis from the project (see Section 5.0 Lessons Learned).

The Socio-economic complex setting has been completed and the complex became active in November 2006, after water and electricity were connected. Building two rooms to be used as management office and pottery workshop finished the construction work. Currently the complex consists of three workshops for the main “fast track projects”, which are:

- The Embroidery and Sewing project.
- The Mushroom project.
- The Pottery project.

The socio-economic team developed new pottery products after the market test showed that they were successful and approved by the customers. The new trainer provided the project with new designs of replicas, solving the problem of leakage that occurred earlier, using *“Geffi”*³⁸ olive residues as a source of alternative energy for heating the kiln, and could effectively imitate other original designs. In addition, the team is searching for the feasibility to produce ceramic products along with new designs of pottery.

A feasibility study and market testing for local honey production from wild bees was carried out. The market test showed that the price of the honey sold was too expensive. A comparison of Dibeen honey with that from other localities showed that it was not competitive, therefore, the socio-economic team decided to drop off this idea. In addition, this project will be adopted in *Mujib Nature Reserve* where the situation is considered to be more favourable.

The socio-economic team organized a one-day workshop targeting social and cooperative societies and institutions of Jerash Governorate. These were intended to introduce the

³⁷ Pattern of Use Report, 2006

³⁸ Residues from olive processing for oil production are used as a fuel.

local societies to the GEF-UNDP/SGP³⁹. Participants were introduced to RSCN's work in general and its mission, and then, to the SGP. The socio-economic Team Leader has visited the cooperatives and societies on a regular basis to develop the five proposals that are now under discussion with the SGP.

There was an apparent reluctance by the project to engage and link with other agencies and programs that supported community-based resource management, organizations involved in natural resources development work, and others in community and social development, despite the commitment to make use of the experiences and resources of others – as was proposed in the Project Document.

The opportunity was also missed to establish a linkage with leading NGOs already working in the field (for instance *Jordan River Foundation*) that could have enabled the project to benefit from their considerable experience in working with local communities in rural development and to have produced a significant multiplier effect.

3.1.8 Outcome 3 A National Pool of Qualified Personnel in Conservation Orientated Forest Management

The project developed a training plan in 2006 and has carried out a review on January 2007 to assess if there were any gaps. The plan was prepared based on the Training Needs Analysis (TNA), which was completed for all Dibeen project staff (including those of the socio-economic sub-projects).

The following are some of the major training events took place through the project:

- Training on the use of GPS.
- Orientation for the new staff.
- Training in "Forestry Inventory" program.
- Protected Areas Management Planning.
- Training on Patrolling System and Procedures.
- Study tour to two of the national protected areas.

There is a proposed study tour for the reserve team to Spain, Tunisia and Morocco, which has been postponed.

The slow start to the project has caused delays in conducting and implementing the both the training needs assessment and the training plan that was developed in 2006⁴⁰. The project has not built the linkages with the FD and has excluded the organization

³⁹ GEF-UNDP Small Grants Programme

⁴⁰ The FE recognizes the present Project Managers (and his staff) efforts in getting these activities up and running.

from training⁴¹ that would have benefited the national capacity to manage forests for greater biodiversity and ecosystem benefits⁴².

There is no evidence of inventory and analysis of the potential of various new partners (including the Departments of Forestry) to work with the project.

3.2 PROJECTS ADAPTIVE MANAGEMENT FRAMEWORK

An analysis of the project's strategy (as elaborated in the Project Document) has identified that the project was intending to develop a number of interventions. Overall, the project was planning an intervention in a multivariate, multi-stakeholder system and the aim was to make a number of changes to the system that would positively influence the processes of land management towards biodiversity conservation through *protection, sustainable utilisation, alternative livelihoods, resource replacement* and *raising awareness*.

The *Activities, Deliverables* and *Outcomes* are a means to an end (the *Objective*). They are not ends in themselves; therefore, the project's strategy relies on all of the *Outcomes* making a positive contribution to the *Objective*. However, if a particular activity is not contributing to the *Outcome* then it is important to recognise this, ask why, and consider what can be done to ensure that it does.

Project management must be an iterative process. That is, it must constantly keep referring back to the goal and objectives and critically assessing (through a broad spectrum of stakeholders) how the activities are contributing to the outputs and how those outputs are leading to the objective. Therefore an adaptive management framework should provide⁴³:

- **A basic hypothesis of the system** that is being managed, that is, local livelihood strategies and external development pressures are negatively impacting upon the Dibein Forest ecosystem due to weaknesses in the management system (poorly-controlled access) and a lack of incentives for sustainable management due to poor and inappropriate pricing of the natural values and a multiplicity of tenurial systems for both land and natural resources;
- **A clear statement of management objectives**, including a coherent strategy of how the sum of the outputs contribute to achieving the objective, that is, the project will establish a core protected area of DNR, develop appropriate pricing mechanisms and return the benefits of sustainable management (both in and outside the DNR) to those that are closest to the resource and bear those management costs in order to provide the motivation for conservation

⁴¹ The FE notes that the Directorate of Jerash FD attended a one-month training course on modern techniques of forest management in the USA and FD staff have attended several training programmes organised by DNR (fire management and basic civil defence). RSCN also invited the FD through DNR to provide training for reserve staff on enforcement of Forestry Law.

⁴² The FE would consider such activities as a training needs analysis, gap analysis and collaborative approaches to developing management activities as evidence of the project's impact in this area.

⁴³ Adapted from Sustainable Use Principles, The Southern African Sustainable Use Group, IUCN Species Survival Commission.

management (sustainable use and to recover management costs). Furthermore, the project will develop alternative livelihood activities to reduce dependency and replace certain resources with alternatives where appropriate and raise awareness of the natural values of the area amongst stakeholders;

- **A monitoring system** to provide information needed to modify the management system or the objectives or to revise the hypothesis if necessary. This must include a reporting system that captures the “mistakes” as well as the successes and regularly reviews the various interventions against the successes and the constraints. Importantly, the monitoring system should also track the risks and assumptions, and;
- **The means to modify the system** to bring it in line with the objective, that is, the log frame, regular management meetings and targeted external TA, strategy meetings, etc.

However, when the assumption (which was a reasonable assumption⁴⁴) made regarding the larger regional forest park’s creation was not realised, the project did not respond, despite the original hypothesis clearly identifying the need for a larger system of conservation orientated land management than was possible given the small area of DNR. Indeed, the US\$40,000 allocated for the Dibeen Project to interact with the RFP Project was absorbed into other budget lines. A critical component of the projects strategy or “hypothesis” had not materialised and the project did not respond.

The projects response appears to have been to forge ahead with the components that it was familiar with, the establishment of DNR, the socio-economic enterprises and raising awareness. There have been no revisions to the project LFM despite these significant situational changes encountered by the project over its lifetime. Indeed, the quarterly and annual reports have been based upon the 7 *Outputs* rather than the 3 *Outcomes* suggesting that the project is focusing on delivering a number of specific products (DNR, Technical Reports, a pottery, a mushroom farm, etc.), rather than addressing the issues of embedding DNR within the local democratic institutions, related government agencies and informal social structures. This has affected the projects ability to link activities with outcomes and progress towards the project objective.

3.2.1 Adaptive Management and Ecosystem

It is important to differentiate between the *project’s* adaptive management and the *management of DNR itself*. The project set DNR in the wider context of the socio-political structures of the region. However, the management of the reserve requires a separate and distinct adaptive management approach as it relates to the dynamics of the ecosystem and the internal pressures upon specific habitats.

Paradoxically, the project has shown considerable initiative when dealing with the volume of visitors. By all accounts, the number of day visitors took everyone by surprise and the project has demonstrated considerable skill in trialing different visitor

⁴⁴ The LIFE00/TCY/HKJ/000049 project proposal was approved by the European Commission on 5th December 2001

management techniques and adapting the strategy. Although it should be noted, that the strategy despite being clearly understood by project staff, remains unwritten.

However, there needs to be greater detailed and documented discussion on the management processes within the reserve⁴⁵. A very simplified view of DNR suggests that it is part of an oak-pine complex and at its most northern end oak is likely to be the dominant climax species. However, the principle aim of the reserve appears to be to maintain Aleppo pine as the dominant species⁴⁶.

If the purpose of DNR is to maintain Aleppo pine as the dominant species then this needs to be clearly stated in the management plan and specific interventions to maintain the forest in this particular state of succession developed⁴⁷.

This would give the management the opportunity to try out new and collaborative management systems such as oak harvesting for charcoal⁴⁸, using the local charcoal producers to defer management costs and generate sustainable local enterprises.

3.2.2 Monitoring Systems

Monitoring of the project by the Implementing Agency has been satisfactory with regular field visits, assisting in the preparation of the Annual Project Review / Project Implementation Review and subsequent Tri-Partite Review, coordination of the Combined Deliver Report and reviewing and following up the project's quarterly progress reports, financial reports and work plans

However, as detailed in earlier sections there have been a number of critical weaknesses in the monitoring of the project cycle. These have resulted in missed opportunities to either refit the project LFM to the project or *vice versa*. This has happened despite attempts by the Implementing Agency and the GEF Regional Coordination raising these issues through the risk assessment procedures.

While it has been demonstrated that there were a number of extenuating circumstances caused by events external to the project⁴⁹, it is not unreasonable for the Executing Agency, given its long and admirable experience in managing protected areas in Jordan, internal organisational strengths and evident human capacities to have taken the initiative in addressing these issues at some point in the project⁵⁰. Instead, the

⁴⁵ The FE notes that the PM and the project management team have some very good ideas and certainly appear to be applying their minds to many of these issues, but the project needs to develop a system to make these good ideas operational rather than remaining "aspirational".

⁴⁶ Aljoun NR which is also managed by RSCN and is part of the same complex although now separated by agricultural development is predominantly oak.

⁴⁷ It would be important to investigate historical management practices to see if these have effected the species composition and what the possible effect of stopping these practices will be on the future species composition.

⁴⁸ The FE notes that much of the charcoal production is for the Arghila cafés market (Dibeen Reserve: Situation Analysis, March 2005) and could present considerable marketing opportunities and additional value to the product

⁴⁹ Events over which none of the partners had control.

⁵⁰ For instance by producing a re-fitted project LFM and supporting updated strategy document.

Executing Agency has implemented *some* components of the project very well, but not *all* the necessary strategic components to achieve the *Objective*.

This could be due to a number of reasons:

- The Executing agency did not fully understand the project's strategy and the project assurance role of the Implementing Agency.
- The Executing Agency does not have a sufficiently developed adaptive management framework to challenge itself.
- Given the slow start to the project the Executing Agency had a genuine, and understandable, desire to get on with the job and get some of the key components in place on the understanding that RSCN will ensure that there is continuity after the project and time to address other issues in the future.

The FE considers that the latter is the case, but feels that it is important that the Executing Agency clearly demonstrates how it intends to address the issues that have not been resolved during the projects lifetime. This would be necessary for UNDP-GEF to have the confidence that the project had in fact contributed to the GEF Objectives and contributed positively to the process of conserving biological diversity in Jordan.

3.2.3 Risk Management

The initial risk and assumptions were developed in Section 8 of the Project Document. When managing for conservation it is important to remember "the expectations of different players highlight a fundamental difficulty in the degree to which the outcome of any multivariate problem can be predicted. In the hard sciences like physics and chemistry the majority of variables are known and can often be controlled precisely in an experimental sense. So predictions about outcomes can be reasonably precise. In fields such as ecology, economics, wildlife management, politics, business and the social sciences generally, there is a large number of known and potential variables, all subject to continual change, all interacting with each other in ways that may be predictable or non-predictable. Precise prediction about outcomes is much more difficult. Applying science *per se* to the problem makes absolutely no difference to the inability to predict precisely or accurately when you have complex multivariate problems - it is a reality.

By way of example, in conservation and sustainable use we do our best to identify and account for the most important variables based on current knowledge. But we have to deal repeatedly with situations in which a variable considered unimportant or trivial one day, assumes monumental proportions the next. On occasion it is discovered that the most important variable was not identified and not measured⁵¹."

Decisions are made based upon the best available information. Mistakes are only made when information that is available when decisions are made, is ignored. Therefore, it is important that a project clearly articulate their arguments or rationale for a particular decision, identify the assumptions and possible risks and are given the

⁵¹ Dr. Grahame Webb, Director, Wildlife Management International

space to make the decision and settle on a course of action and continue to monitor its progress.

Three risks were identified, two of which were related to DNR management activities (the difficulties in preventing illegal activity and the necessity of closing visitor “hotspots”), the third risk, was related to coordinating the large number of stakeholders and was essentially a project risk rather than a protected areas management risk.

Two “prerequisites” were identified in the document. These “prerequisites” are the *assumptions* upon which the project is based. They are identified as:

- The Government of Jordan agrees to allocate the core of Dibeen Forest to the RSCN as a nature reserve by a decree issued from the Cabinet, as in all other nature reserves declared to date.
- The land use planning scheme developed for the Forest Park will be given legal status within the Government’s planning system and thereby enforceable under statute.

The FE considers that these assumptions were correctly identified, however, they should have been flagged as “killer assumptions”, and that the projects success (the *Objective*) and sustainability of the outcomes was entirely dependent upon them holding true, that is, that DNR and the larger Forest Park *would* be created.

3.2.3.1 Retrofitted Risk Assessment and Assumptions

As previously discussed, a LFM was retrofitted to the Project Document during the Inception Phase. This log frame sets out the risks and assumptions according to the *Objective, Outcomes* and *Outputs*. The FE considers that the risk analysis was particularly weak in this LFM. The assumptions regarding the creation of the DNR and the larger Forest Park survive as:

“Dibeen Reserve declared, Conservation plan implemented”

However, the Inception Report fails to set out any strategy to deal with the assumptions and risks. In other words there is no “*Plan B*” and the indicators identified in the LFM are unlikely to alert the project when risks are being realised and assumptions are proving to be just that, *assumptions*.

To illustrate this point, any such project developed to address the issues around DNR was dealing with a multivariate and multi-stakeholder situation and the threats to DNR were essentially external from development pressures. The purpose of the project was to interact with the process of land use and lift that process to provide positive gains for biodiversity. Conservationists work in the grey area where society, the economy and the ecosystem collide. The job of the conservationist is to manage the processes to ensure that when they *do* collide it does not result in a “train crash”. Without an adaptive management framework, the SSC/Jordan-Dubai Capital Development⁵² project, for instance, was just such a “train crash” waiting to happen.

⁵² The FE does not infer any judgement on the development itself rather the failure of the project’s

3.2.3.2 Mid Term Evaluation

A MTE was carried out in June 2006. The MTE is another critical point in the project cycle when an external assessment of the progress of a project can be used to challenge the assumptions that the project is based upon, quantify the risks and make any necessary adjustments in order to achieve the project objective.

The MTE's assessment was that the projects progress towards its predicted results as *moderate*. Based upon this evaluation a number of recommendations were made. Essentially these were addressing:

- Weaknesses in the reserve management particularly as it related to the visitor management strategy and the integration into the larger local economy.
- The viability of DNR itself and the need to integrate it into the larger forest area to reduce threats such as edge effects and the loss of biodiversity.
- Strengthening mechanisms that promote local participation.
- Greater inclusion in the project management of UNDP by the Execution Agency.

Critically, the MTE did not require the project to revisit the project's LFM as a condition to be met in order to secure further funding and this was not insisted on by UNDP in the Management Response⁵³. Therefore an opportunity to update and rationalise the strategy, in light of events that had taken place since the projects inception, was missed. UNDP-GEF coordination should have required the project to refit the LFM, particularly in respect to the three additional risks identified by the MTE⁵⁴, namely; the redevelopment of SSC land, change in current legislation pertaining to forest and reserved areas⁵⁵ and the socio-economic programmes meeting local community expectations.

However, the UNDP Management Response to the MTE does clearly indicate that the Project Assurance role was attempting to bring the project back on track by pursuing the issues of land use and zoning within the context of the project and forging closer ties with local agencies such as the Forestry Department. What is not clear is how the *project* responded to these issues.

While the failure to revisit the LFM may be attributed to the lapse in UNDP-GEF coordination at that critical time⁵⁶, it is not unreasonable to have expected the Executing Agency, given its internal strengths and stated track record to have exercised an adaptive management approach itself. In other words the project backstopping from the Executing Agency was not challenging the project sufficiently.

adaptive management to predict such issues related to privately owned land and put in place mechanisms to deal with them before they happen.

⁵³ However, the FE considers that the Management Response was correct.

⁵⁴ These issues were also identified in the UNDP-GEF RTA's mission in Feb 2006. *One Page Mission Report Summary, 14 February 2006. Author: Tim Clairs.*

⁵⁵ The FE notes that the legislation was dropped following a successful lobbying campaign by civil society organisations including RSCN.

⁵⁶ The hiatus in GEF coordination was a result of the evacuation of the Beirut Regional Office in 2006.

3.2.3 Work Planning

The work plan developed during the Inception Phase and included in the Inception Report has a number of problems. Firstly, it reverts to the 7 *Outputs* developed in the Project Document and not the 7 *Outputs* that were produced following the retrofitting exercise. Furthermore, as noted by the MTE, the *Activities* indicated in the detailed two-year work plan don't correspond to the *Outputs* and *Outcomes* in the LFM. While this is not of great significance it would have been useful to reorganise the *Outputs* to demonstrate how the various activities were contributing to the *Outcomes* and thus the projects *Objective*. Therefore, it indicates that there was some confusion in the planning process at that time.

Of greater significance is the fact that there was little in the work plan to indicate that activities that would link sustainable management practices of the forest resources to economic benefits. Despite the espoused strategy of sustainable use of forest products, the work plan was geared to an "alternative livelihoods trade off" strategy. The FE considers that by ignoring the possibility of sustainable use of natural resources in the forest surrounding the DNR, the project was taking an extremely risky approach and was not considering other options that might have been more cost effective and socially equitable than the protectionist approach that was developing.

Despite the collapse of the regional forest park project, recommendations contained in the socio-economic survey, attempts by the Implementing Agency and the GEF RTC to flag these risks, there have been no revisions to the work plan to address these issues. As the project has progressed there appears to have been a slow but steady divergence between the project described within the Project Document and that which was being implemented on the ground. The resistance of the Executing Agency in providing information on future activities⁵⁷ has likely contributed to this divergence.

3.2.4 Reporting

The quality of project reporting has improved over the projects lifetime. However, the issues raised earlier in this report regarding adaptive management, implementation of all the components of the strategy and the UNDP project assurance role also relate to the projects reporting.

Issues that were being picked up in the PIRs mostly related to the larger RFP and the socio-economic programme were not being addressed in the projects reporting suggesting that they were being ignored or misunderstood.

The FE recognises the constraints on project managers and pressures that are placed upon them. Furthermore, it is important to understand that the motivation of a good project manager is naturally to get the various jobs done. It is also important to put this in the context of the project having four project managers before the present one. By the time the fourth project manager took over, the project was behind in its implementation and likely it had become accepted wisdom that the establishment of

⁵⁷ This is documented throughout the various projects correspondence and management responses from the Implementing Agency that the FE considers that there is sufficient evidence to support this statement without detailing specific incidents.

DNR and the socio-economic “fast track” enterprises were the principle objective of the project. In a project with such a high turnover of project managers the responsibility lies with the Executing Agency to ensure continuity between the *Project Document* and the *Project Objective* and to work towards developing a good relationship with the Implementing Agency.

An external auditor has audited the project and there were no issues raised.

2.4 UNDERLYING FACTORS

The original problem identified by the Project Document can be summarised as the loss of biological diversity from the Dibeen ecosystem. In other words, the process of land use was resulting in a less diverse system. Therefore, the project designed a number of discrete interventions that were intended to interact with the dynamic processes of the Dibeen ecosystem and land use to create a system where there was either no further loss or even gains in biological diversity. It is important to understand that the GEF investments are in the form of a project. The intention is for the project, a discrete and time bound intervention, to interact with the processes and move them in a direction that benefits biodiversity and the environment. It might be in the form of a protected area, as was the Dibeen Project. But it was also identified that addressing the other threats relating to land use were essential to support the protected area.

Therefore, the project concept was to engage with the processes of land use and move them towards a system that was more favourable to biodiversity conservation at the same time as it produced a number of “products” such as the nature reserve, several enterprises, an awareness campaign, the management plan, etc. RSCN as the Executing Agency appears to be focusing on these deliverables⁵⁸ - the products - while the Implementing Agency has been focusing on the process. At times this has set up a dissonance between the two agencies. RSCN will ensure the continuity of DNR but it is also important that the project, within its funding lifetime, sets in place the mechanisms (land use systems, regional forest park structure, incentive-based conservation mechanisms) that will demonstrate sustainability.

The project has not clearly demonstrated adaptive management in all areas and this has had a profound effect upon the achievements. Of two “killer” assumptions made in the projects initial planning, one proved to be just that, an assumption. When the RFP project failed there was no “Plan B” and therefore the project moved ahead with a flawed plan to achieve the *Objective*.⁵⁹

⁵⁸ The FE recognises that project managers are under considerable pressure to get things done, more so when delays have been encountered at the beginning of a project and the comments here should not distract from the efforts of the PM and the PM Team in establishing DNR.

⁵⁹ Military strategists work on the basis that “a battle plan never survives the first contact with the enemy” and therefore strategies should be constantly updated in light of situational changes and experience.

3.3 UNDP CONTRIBUTION

UNDP TRAC funds amounted to US\$100,000 predominantly targeted at equipment and furniture (US\$75,000) and local consultancy (US\$25,000). The UNDP Small Grants Programme has been utilised by the project's socio-economic programme which is currently working with a small number of local, mostly women's groups, to develop proposals.

Despite the sometimes-strained relationship between UNDP CO and RSCN, as stated earlier, the FE considers that the UNDP project assurance role has been correctly applied to this project and is broadly in agreement with the findings of the MTE; "there have been a significant number of monitoring and review exercises conducted by the UNDP Jordan including field monitoring visits (and reports), participation in the Tri-Partite Review, preparation of the Annual Project Review / Project Implementation Review reports, and production of the Combined Delivery Report. The UNDP has also been active in reviewing and following up on the project's quarterly progress reports, financial reports and project work plans. The UNDP Jordan's provision of financial resources has also been in accordance with project norms and in a timeframe that is supportive of covering the costs of project activities."⁶⁰

The FE notes that the role of the TPR might have been used to greater effect to drive the process of integrating the DNR within the wider ecosystem and institutional framework.⁶¹ While the UNDP CO project assurance and the GEF guidance was picking up on most of these issues related to the sustainability of the GEF *Objective*, the *project* did not have an adaptive management framework and therefore there was no way of addressing the issues.

The delay in starting the socio-economic programme makes it difficult to predict the outcome of the SGP. However, the FE notes that UNDP has been very active in driving this.

3.4 PARTNERSHIP STRATEGY

The Project Document made it very clear that the project would be working in a multi-stakeholder and multi-agency situation where numerous authorities and

⁶⁰ Conservation and Sustainable Use of Biodiversity in the Dibeen Nature Reserve Project, Mid-Term Evaluation, Final Report, November 2006. P 31

⁶¹ "Unclear institutional responsibilities. The RSCN mandate to manage the Nature Reserve may be accepted by other entities with a stake in Dibeen, but it is not always fully appreciated" and "There is no coordinated liaison between RSCN reserve rangers and MoAg forest rangers. There is no agreed delineation of boundaries or responsibilities. There is no coordination of forest management strategies (particularly with regards to fire ecology). RSCN require MoAg permission to cut trees in the reserve. The Ministry of Planning and International Cooperation Secretary-General (TPR Chair) noted the lack of cooperative agreement between RSCN and the 2 municipalities covering the Dibeen reserve. There is no agreement with the Ministry of Municipal Affairs or other ministries (such as for roads – a road linking 2 villages cuts through the reserve)" were all issues that were also identified in the UNDP-GEF RTA's mission in Feb 2006. *One Page Mission Report Summary, 14 February 2006. Author: Tim Clairs*

responsibilities were overlaid on the ecosystem. Therefore partnership strategies were critical for the success of the project.

The most significant partnership should have been with the Ministry of Agriculture, Forestry Department. However, the project has failed to build a relationship with the FD. The FE considers the relationship with this agency, the largest player in forest management, to be strained. Furthermore, *Outcome 3 A National Pool of Qualified Personnel in Conservation Orientated Forest Management* should have been predominantly targeted at bringing the aims of RSCN (biodiversity conservation) and the aims of the Forestry Department (traditional forest management) closer together.

The project has made some headway in developing partnerships at the local administrative level through the municipalities and with the Governorate of Jerash where relationships appear to be cordial and there is considerable support. However, the basis of this support is principally verbal and it remains to be seen how RSCN will embed DNR within the planning processes and procedures of these local administrations⁶².

Considering the human pressures surrounding DNR and the strategic aim to develop income-generating activities as alternative livelihoods to absorb opportunity costs, the FE would have expected to more evidence of partnerships with organisations involved in rural development⁶³.

The Project Document required the project to set up a Steering Committee in order to “guide and coordinate project activities and provide a vehicle for local community participation”. At least nine separate organisations were listed as members of the Steering Committee. It is hard to judge the effectiveness of the Steering Committee as set out in the ToR developed in the Project Document:

- Review and monitor the progress of the project according to the outputs, activities and budget allocations prescribed in the project document;
- Facilitate coordination between the key stakeholders in the development of the wider Forest Park, and;
- Provide general guidance and technical support to the implementing agency when required.

The large membership of the Steering Committee has made it unwieldy and it should also be noted that the Steering Committee as set out in many GEF projects is not the best place to allow local community participation in the decision-making progress. Mechanisms that allow local community participation should be set at a lower level than the Steering Committee, which is essentially a bureaucratic and technical committee.

⁶² The FE notes that the Reserve Manager attends the Jerash Governorate planning meetings and recognises that this is a positive sign of participation.

⁶³ For instance the Jordan River Foundation.

4.0 RECOMMENDATIONS

The FE recognises the considerable achievements of the Dibeen Project and accepts that the FE has focused to a large extent on the areas of the project that have not performed as well as was anticipated in the project's design. This is a regrettable function of the UNDP-GEF evaluation process in order to apply an adaptive management approach to address weaknesses in the project and ensure that the successes of the project are sustainable beyond the life of the UNDP-GEF investment. The FE hopes that this does not detract from the successes of the project and the hard work and commitment of all those who have been involved in it. As a final evaluation, and given the role of RSCN in the ongoing management of the project site, it is appropriate for the FE to provide recommendations for RSCN. There is little the project itself can do in the remaining time available. Rather than focus the evaluation attention only on this small amount of time (6 months), the evaluation team can also provide longer-looking recommendations for RSCN as an organisation.

4.1 OVERALL RECOMMENDATIONS

- The project holds workshop of stakeholders (MoA and FD, MoE, MoTA, Governorate, Municipalities and UNDP) to map out the future of DNR within the larger Dibeen Forest complex. This meeting should be used to map out a common vision for, and decide the appropriate roles and responsibilities of these agencies in, managing the various components of the entire forest system. Within this vision there should be a clear statement to protect the natural values of the Dibeen Forest ecosystem for the conservation of biological diversity and the economic development⁶⁴. The vision should also provide a clear statement that conservation of the landscape and other natural values will be through a mixture of protection, alternative livelihoods *and* sustainable use⁶⁵.

One possible outcome might be to establish a Board for the management of the entire forest area and there may be possibilities of partnerships with private sector interests in the area, particularly in relation to tourism.

Following the workshop the GoJ makes a clear statement that the RSCN will continue to manage DNR after the end of the project. The project should consider co-opting IUCN to facilitate the workshop.

- The DNR management revisits the project LFM according to the draft LFM (Annex 8) prepared during this FE and prepares/updates *Outcomes, Indicators and Targets* to guide the management of the nature reserve after the end of the UNDP-GEF funded project. This should include a clear identification of the

⁶⁴ It is important that the authorities take note of the SSC/Jordan-Dubai Capital development as a precursor of commercial organisations using the natural values of the area for economic purposes. Without adequate planning those values, along with the investment possibilities could be lost through inappropriate development schemes, particularly on privately owned land.

⁶⁵ The FE considers that tourism of any kind (nature-based or recreational) is use of these natural values and not an alternative livelihood.

risks and assumptions upon which the strategy is based upon and coherent plan to deal with risks if and when they materialise. **(RSCN to implement)**

- The RSCN familiarises itself with the UNDP-GEF Project Assurance role, the Result-Based Management System and the various toolkits (UNDP-GEF Atlas Risk Management Module, Handbook on Monitoring Evaluation for Results, etc.) already supplied by UNDP CO and brings its systems in line for any future UNDP-GEF project implementation. **(Executing Agency to implement, Implementing Agency to assist)**

4.2 **RECOMMENDATIONS OUTCOME 1: *Alepo pine forest conserved through the establishment of the Dibeen Nature Reserve within the context of a regional park approach***

- In order to ensure the sustainability of the DNR (as it relates to the GEF *Objective*) it is necessary to revitalise the concept of a RFP. This need not be within the context of a “project”. If the only means at the disposal of the various agencies involved in land management are what they currently have, then these should be utilised. Economic development and the conservation of biodiversity and other natural values of Dibeen Forest (such as landscape) need not be mutually exclusive, indeed uncoordinated development is likely to destroy the very values that are driving the currently small amounts of investment in the area. Therefore, the project should investigate embedding the RFP concept or similar at the Governorate level through existing planning mechanisms and links to regional tourism plans. The possibility of collaborating with private sector partnerships in driving this process should be explored by RSCN by raising awareness of those companies already involved in developments in the Dibeen Forest for the need to have a coherent plan to “protect” their investment. **(Executing Agency to implement, Implementing Agency to “soft” assist)**

RECOMMENDATIONS OUTCOME 2: *Sustainable economic uses developed for the forest*

- DNR management should carry out a study into the effects of various management regimes on the structure and composition of the forests, particularly the effects of charcoal production on the species composition. The study should consider the possibility of sustainable harvesting levels and means of adding value to and reducing volumes of harvested products. This study should consider both the ecological and management aspects of the forest. **(DNR Management to implement)**
- A significant threat to DNR as well as the larger forest area is not necessarily over-exploitation of the resources but the pressure to economically develop land. Considerable areas surrounding the DNR are under private ownership and although laws currently exist that prevent development on this land if there is significant remaining tree cover, these areas remain at risk, particularly so if they are economically inactive. Therefore, in addition to the alternative livelihoods programme, RSCN should investigate possibilities for sustainable use of forest resources within Dibeen Forest by building a broad

consensus amongst key agencies (MoA, FD, MoE, etc.) based upon the principles of sustainable use as an incentive for conservation management. RSCN should investigate the possibilities for community-based and private enterprise-based sustainable natural resource management systems on surrounding forestland. This should include:

- Income generation and employment creation through SMEs (identification of forest resources with economic values, processing, marketing, etc.).
- Capacity building of community institutions, such as CBOs, in governance, accountability, benefit distribution, etc.
- Management of *in situ* natural resources at the community level (the 'Natural Resources Management' in Community-Based Natural Resource Management). Establishment of user groups, conditions for access, harvesting techniques, internal sanctions, etc.

(RSCN to implement in collaboration with FD, MoA and MoE, possible resource agencies GEF, IUCN, possible partners Jordan River Foundation)

- The RSCN and the reserve management adopt an adaptive management approach (Annex 11) towards the management of DNR and integration of the reserve within the larger forest area. This needs to be carried out at two levels. Firstly as the nature reserves relates to the larger forest complex in developing incentive-based forest conservation in parallel to alternative livelihoods, and secondly with the management practices within the nature reserve⁶⁶. The reserve management can use this to trial innovative and collaborative management systems for the various habitats. **(RSCN to implement)**

4.4 RECOMMENDATIONS OUTCOME 3: *A national pool of qualified personal in conservation orientated forest management*

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- Prior to the closure of the project DNR management work with FD to develop common vision for, and approach to, Dibeen Forest management. This should be in addition to the larger workshop discussed under the general recommendations. It is important that the involved agencies, MoA (FD), MoE and RSCN reach a unified position of the management of these resources that recognises the utilitarian values as well as the biological and aesthetic values of the Dibeen Forest.

The outputs of this should be an agreed management policy; a gap analysis of agency capacities for ecosystem management, training needs assessment and an analysis of related legislation with any necessary recommendations to harmonise laws. A training programme should then be designed that develops ecosystem, biodiversity and visitor management capabilities of FD and the FD continues building capabilities of DNR management in appropriate areas (fire

⁶⁶ The FE notes that an adaptive management approach is being used towards visitor management but this needs to be strengthened and formalised with specific indicators. A useful resource web site can be found at <http://www.for.gov.bc.ca/hfp/amhome/introgd/toc.htm>

prevention, enhancement planting, propagation, etc)⁶⁷. **(Executing Agency to implement, consider co-opting other organisations such as IUCN to advise, Partners include MoA, FD and MoE, Executing Agency to verify to GEF).**

5.0 LESSONS LEARNED

Although the FE has made it clear that the approach taken in DNR is not the full strategy or hypothesis elaborated in the project document⁶⁸, it is apparent that there is considerable interest in RSCN's approach towards protected areas management from many different quarters because it is widely held that this project provides a very interesting test case of a particular hypothesis, that of an "*alternative livelihoods trade-off*". Not just UNDP or GEF, but many stakeholders concerned about protected area management in the region are interested to receive guidance on whether the hypothesis holds, under what circumstances the hypothesis may hold (i.e. its replication potential) or whether there are alternatives to be considered.

The approach can be summarized as:

- RSCN has been successful in developing a particular approach to protected area management - it is one of the few "successful" models of alternative livelihood "compensation".
- Support for the protected area from the local community is achieved by providing alternative livelihoods of value to international tourists. Carefully targeted community recipients are then given employment (and *prestige*) working as suppliers for the international tourism market (i.e. Wild Jordan).

The apparent or unstated *hypothesis* of Dibein is that the successful RSCN model can be transposed:

- To a very small size nature reserve.
- With very high local visitation pressure.
- With high local community resource use.
- With strong surrounding land-use pressures (private land development, goat herding, olive grove expansion).

Many countries in the region have been watching this test case because they too have small protected areas (i.e. Lebanon) and a mix of anthropomorphic pressures and they want to know if the RSCN alternative livelihood model could be applicable for them, and under what conditions, or if not, what else could work better?⁶⁹

⁶⁷ The FE recognises that the differences of approaches to forest management of both RSCN and the FD are borne out of a genuine feeling of responsibility of the individuals and the institutions to protect forest resources and there is considerable merit in both approaches.

⁶⁸ The strategy or *hypothesis* elaborated in the Project Document placed equal, if not greater, emphasis upon the sustainable use of forest resources.

⁶⁹ RE: Comments on the first draft FE Report for Dibein Project, Tim Clairs, email correspondence, 16 July 2007 19:14

However, the FE cautions against trying to draw any concrete conclusions, regarding the approach, from this evaluation for a number of reasons:

- The time available for an evaluation and the scope of the evaluation does not allow for the necessary in depth analysis, in other words there is only so much that can be achieved in 23 days.
- The FE had neither the time nor the mandate to critically examine the approach in other protected areas under RSCN management.
- For reasons documented in the FE the socio-economic programme began late (in early 2006) and it is too early to make statements about whether it is successful on a business level *and* successful in absorbing the opportunity costs that will produce changes in local behaviour patterns and livelihood strategies.

Leaving apart the sustainability of a very small (8.5 sq. km) reserve and the practicalities of conserving biodiversity at this scale⁷⁰ there remains the question of whether an alternative livelihoods approach is sufficient to deflect human pressures on the protected area. The threats to the Dibeen Forest are not just those that result from over-exploitation, indeed over-exploitation should be considered as a symptom of inefficiencies in tenure and pricing systems and a weakness in the institutions (and policy framework) that manage these resources rather than a specific threat. The threats to the greater Dibeen Forest and DNR itself are resulting from a number of driving forces. Fragmentation of habitat and replacement of “naturally” occurring habitats with agriculture or other development may pose a greater threat to the biological integrity of the system than over-exploitation of biodiversity *per se*.

In a system where development pressures, and not just subsistence needs, are one of the driving forces of habitat and species loss it is important to consider that sustainable management of a natural resource – species, population, ecosystem – is best achieved if the resource is allowed a focused value. Failure to adequately value natural resources within a market economy will result in unsustainable use or resource replacement with other land use options. Therefore:

- All species should have value and mechanisms that remove markets for species or products derived from species – such as prohibitive legislation – may reduce incentives for conservation. To promote sustainable utilisation it is therefore necessary to build well-regulated markets and strong linkages to legal producers.
- The rate of return - the *benefit* – from sustainable use of a resource must at least equal the return from alternative land use options including mining the resources to extinction to secure its short term capital value. However, within this trade off consideration may be given to the reduction of risk as a result of a diversity of livelihood opportunities versus a single livelihood activity. Therefore, it is important to look at this in terms of basic human nature in respect of determining a range of motivations and values.

⁷⁰ A cursory look at the 17 species listed in the Project Document would suggest that at least 6 of them require areas in excess of 8.5 sq. km to maintain viable populations.

Resource replacement and alternative livelihoods could alter the relative values of the forest resources *in situ*. Use may, and often does, improve the status of the used population. This is the basis of the argument for *use* as a conservation tool and the argument carries the corollary that *non-use* is the risky option. The precautionary principle should be applied in this sense: it is risky not to use resources – therefore we should use them.⁷¹

As stated earlier, the FE is cautious about drawing lessons from the project. However, it is possible to identify the risks of this approach, which have been set out above. If there is a lesson to be learned then it might be that greater analysis and understanding of the dynamics of these systems is needed before settling on a single strategy and if time is not available to analyse the system then it might be preferable to use a number of approaches rather a single, narrow approach.

Market led approaches to conservation are on the whole robust and effective, however, economists might want to simplify the equation by putting a financial value on the *quid pro quo* of the trade-off. But, it is important to bear in mind basic human nature in respect of determining a range of motivations and values. Self-reliance, independence, the security to manage their resources and determine their future are all characteristics of rural communities and can be strong motivational factors in encouraging sustainable management of natural resources. The alternative livelihoods trade-off approach implies an element of conceding or relinquishing territory and resources, or *authority* and *responsibility*, in return for increased dependence upon an external provider. While this may not always be the case it is important to bear this in mind.

If there is a lesson from this project it is the need for projects that are interacting with ecosystem and land use processes to follow an adaptive management approach that tracks the risks and assumptions as well as the indicators and to apply a number of different strategies. Furthermore, these strategies should be clearly articulated in the project documentation (Project Document, LFM, etc.) This requires a great deal of self-confidence in the management agency to challenge widely held assumptions. For instance, in the face of at least 34,000 local people, many of whom are marginalized and reliant on agriculture and forest products for their livelihoods, the FE has to question the *quid pro quo* of an alternative livelihoods approach that produces 9 jobs. Even in the event that such an approach can deflect the opportunity costs incurred through more effective protection of the forest, it still remains that there is a very large population of people around the nature reserve. Therefore, it is important to challenge the assumption that all of these people can find alternative livelihoods, or indeed *need* to find alternative livelihoods, as there remains the unanswered question of whether Dibe'en exists as an *Aleppo pine-oak* forest complex with *pine* as the dominant species *despite* historical management practices or *because* of those historical management practices?

⁷¹ SASUG, IUCN Species Survival Committee, Sustainable Use Issues and Principles.

EVALUATION REPORT ANNEXES

Annex 1 Final Evaluation Terms of Reference

Annex 2 Itinerary

Annex 3 List of Persons Interviewed

Annex 4 Outline of the Final Evaluation Professional Experience

Annex 5 Project Log Frame

Annex 6 Final Evaluation Feedback Presentation (Power Point)

Annex 7 Final Evaluation *Aide Memoire*

Annex 8 Final Evaluation Draft Project Log Frame (adapted)

Annex 9 Protection, Utilisation and Abandonment

Annex 10 Jordan-Dubai Capital project background

Annex 11 Adaptive Management Framework

Annex 12 Co-financing Document

Annex 13 Tracking Tool

Annex 14 RSCN Comments on First Draft of Final Evaluation Report

Annex 15 Final Evaluation Inception Report and Methodology

Annex 16 Documents Reviewed