



Global Environment Facility

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October 15, 2004

Dear Council Member,

UNDP, as the Implementing Agency for the project, ***Syria: Biodiversity Conservation and Protected Area Management***, has submitted the attached proposed project document for CEO endorsement prior to final approval of the project document in accordance with UNDP procedures.

The Secretariat has reviewed the project document. It is consistent with the proposal approved by the Council in May 2003, and the proposed project remains consistent with the Instrument and GEF policies and procedures. The attached explanation prepared by UNDP satisfactorily details how Council's comments and those of the STAP have been addressed. I am, therefore, endorsing the project document.

We have today posted the proposed project document on the GEF website at www.gefweb.org. If you do not have access to the Web, you may request the local field office of the World Bank or UNDP to download the document for you. Alternatively, you may request a copy of the document from the Secretariat. If you make such a request, please confirm for us your current mailing address.

Sincerely,

A handwritten signature in black ink, appearing to be 'L. Good', written in a cursive style.

cc: Alternate, Implementing Agencies, STAP



22 September 2004

Len
Dear Mr. Good,

Subject: **BD/OP1-BD1 "Syria: Biodiversity Conservation and Protected Area Management" (PIMS no. 227)**

I am pleased to attach herewith the above-mentioned project document. The brief was approved at the GEF Council Meeting in 16 May 2003. Also attached is the co-financing letter from the Ministry of Agriculture and Agrarian Reform. This project did not receive any comments from GEF Secretariat or GEF Council that require response.

As per paragraph 29 and 30 of the GEF Project Cycle, we are submitting this project document for circulation to the members of the GEF Council and, subsequently, for your final endorsement.

Thank you in advance for expediting the review and endorsement of this project.

Warm regards.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Frank Pinto', is written over a horizontal line.

Frank Pinto
Executive Coordinator

Mr. Leonard Good
Chief Executive Officer and Chairman
Global Environment Facility
Room G6005
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Washington D.C. 20433

Cc: Mr. Tim Clairs, Regional Coordinator, GEF RCU-Arab States

UNDP Project Document

**Government of Syria
United Nations Development Programme**

Main partners

Ministry of Local
Administration and
Environment

Ministry of Agriculture
and Agrarian Reform

Project Title:

Biodiversity Conservation and Protected Area Management

The project will demonstrate practical methods of protected area management that effectively conserve biodiversity and protect the interests of local communities while supporting the consolidation of an enabling environment that will facilitate replication throughout the country. In order to achieve this objective, the project will produce three outcomes: (i) Policies, legislation and institutional systems are in place that allow for the wise selection and effective operation of protected areas that conserve globally significant biodiversity; (ii) Effective techniques for PA management and biodiversity conservation have been demonstrated at three sites totaling approximately 60,000 ha. and are available for replication, and; (iii) Sustainable use of natural resources in and around protected areas has been demonstrated through the development and implementation of a program for alternative sustainable livelihoods and community resource management.

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List of abbreviations

AEWA	African-Eurasian Migratory Water-bird Agreement
CBD	Convention on Biological Diversity
GEF	Global Environment Facility
HCA	High Commission for Afforestation
HCES	High Commission for Environmental Safety
ICARDA	International Center for Agricultural Research in Dry Areas
IFAD	International Fund for Agricultural Development
IPGRI	International Plant Genetic Resource Institute
IUCN	International Union for the Conservation of Nature
MAAR	Ministry of Agriculture and Agrarian Reform
MAAR-DBPAM	Ministry of Agriculture and Agrarian Reform – Division of Biodiversity and Protected Area Management
MLAE	Ministry of Local Administration and Environment
MLAE-DBPA	Ministry of Local Administration and Environment – Directorate of Biodiversity and Protected Areas
MSP	Medium-size Project
NBSAP	National Biodiversity Strategy and Action Plan
NBU	National Biodiversity Unit
NPA	Nature Protected area
NPD	National Project Director
NPD	National Project Manager
PCU	Project Co-ordination Unit
PIM	Project Implementation Meeting
PIMA	Project Implementation and Monitoring Advisor
PSC	Project Steering Committee
RePA	Restoration Protected Area
RaPA	Rangeland Protected Area
SMPR	Secretariat-Managed Project Review
STA	Scientific and Technical Advisory Panel
TPR	Tripartite Review
UNDP	United Nations Development Programme

Part Ia Situation Analysis

The project will help to ensure that the globally and nationally significant biodiversity of Syria is sustainably used by, and provides benefits to, current generations while being conserved for the benefit of future generations. A detailed description of the problem to be addressed is provided in Part 2.b.i of Section 2 of this document. The relevant outcome in the Country Programme is *SAS: G3- SGN1 – SASN2 institutional framework for environmental management & energy development*. The national institutional and legal framework is described in Part 2.b (paras. 25-28) of Section 2. A description of lessons learned that have influenced project design is provided in Part 2.g.i of Section 2. An independent review of the project design is provided in Annex 4 of Section 2.

Part Ib Strategy

Syria's approach to sustainable development while conserving biodiversity, and its national commitment to these goals, are described in Section 2, Table 1. UNDP's programme in support of these goals is described in Section 2, paragraph 98, while the specific activities undertaken through this project in support of policy development and strengthened national capacities are described in Section 2, paragraphs 83-85.

Part II.a Strategic Results Framework

A detailed log frame matrix is provided in Annex A of Section 2.

Intended Outcome as stated in the Country Results Framework: improved capacity of national / sectoral authorities to plan and implement integrated approaches to environmental management and energy development that respond to the needs of the poor.
Outcome indicator as stated in the Country Programme Results and Resources Framework, including baseline and target: <ul style="list-style-type: none"> •Improved PA's management effectiveness •Direct support for 3 PA's.
Applicable Strategic Area of Support: G3- SGN1 – SASN2: Institutional framework for environmental management & energy development
Partnership Strategy: UNDP convenes and chairs a thematic group on environment to develop environmentally sustainable paradigm into attainable outputs at national and sectoral levels. The group will meet on a quarterly basis to discuss specific issues. Main partners are UN agencies, State Planning Commission , Ministry of Local administration and Environment , Ministry of Agriculture and Agrarian Reform Ministry of irrigation, JICA and EU and others
Project title: Biodiversity Conservation and Protected Area Management Project Number: 227

Intended Outputs	Output targets for 2003-2009	Indicative Activities / Activity Areas	Inputs ¹
Outcome 1 - Policies and institutional systems that allow for the wise	<ul style="list-style-type: none"> • By end of Year 2, a detailed and agreed set of streamlined national institutional arrangements describing the functions of all units and agencies involved in PA management and clarifying their respective roles and mechanisms of co-operation 	1.1 Institutional capacity building for PA management	<u>Activity Area 1.1 inputs</u> <ul style="list-style-type: none"> • Sub-contract #1/TOR#17/BL 72100: Institutional and human resource assessment, \$46,000 • Sub-contract #2/TOR#18/BL 72100: Institutional and human resource capacity building, \$85,000 <p style="text-align: right;">Total direct inputs for AA 1.1: \$131,000</p>

¹ Compared with the budgetary estimates provided in the project brief, two main changes have been made: (i) One activity – “Provide support for improved operational processes, such as planning and financial management” – was removed from AA 1.1 and divided between AA 1.3 and AA 1.4, with corresponding changes made to the respective sub-outcome budgets. (ii) Upon further analysis, it was deemed appropriate to shift some funds from AA 2.2 (biodiversity monitoring) to AA 2.4 (implementation of site management plans. Outcome-level budgets remain exactly as presented in the project brief.

Intended Outputs	Output targets for 2003-2009	Indicative Activities / Activity Areas	Inputs ¹
selection and effective operation of protected areas to conserve globally significant biodiversity	<ul style="list-style-type: none"> By end of Year 4, relevant HQ units possess a critical mass of trained staff able to effectively manage the overall PA system, including oversight of individual PAs By end of project, MAAR has developed and is implementing a comprehensive set of HQ-based activities aimed at managing and extending PAs within forest areas and other dry-land ecosystems (rangelands) By end of project, MLAE is implementing a system for inter-sectoral co-ordination through which it is able to closely monitor and provide direction to other ministries to ensure that the national system of PAs plays a visible role in achieving national biodiversity conservation and sustainable development objectives 	1.2 Human resource development	<u>Activity Area 1.2 Inputs</u> <ul style="list-style-type: none"> Sub-contract #1/ TOR#17/BL 72100: Institutional and human resource assessment, \$86,500 Sub-contract #2/TOR#18/BL 72100: Institutional and human resource capacity building, \$175,000 Total direct inputs for AA 1.2: \$261,500
		1.3 Support for carrying out PA-related co-ordination responsibilities – MAAR	<u>Activity Area 1.3 Inputs</u> <ul style="list-style-type: none"> International consultants (BL 71200): (i) TOR 15.1: Forest ecologist; (ii) TOR 15.2: Protected area financing specialist. Total funding: \$69,300 Local consultants (BL 71300): (i) TOR 16.4: Forest ecologist #2; (ii) TOR 16.5: Environmental economist; (iii) TOR 16.6: Standardization of PA reporting; (iv) Workshop organization. Total funding: \$55,000. Contractual services – Companies (BL 72100): (i) SC#3/TOR #19: PA prioritization and gaps analysis. Total funding: \$60,000 Travel (mission costs): \$72,000 Professional services (reporting costs and workshop expenses): \$22,700 Total direct inputs for AA 1.3: \$279,000
		1.4 Support for carrying out PA-related co-ordination responsibilities – MLAE	<u>Activity Area 1.4 Inputs</u> <ul style="list-style-type: none"> Contractual services – Companies (BL 72100): (i) SC#3/TOR#19 Protected area prioritization and gaps analysis; (ii) SC #4/TOR#20: National-level data management system; (iii) SC#5/TOR#21: Public awareness campaign. Total funding: \$349,500. Local consultants: workshop organization: \$15,000. Travel (mission costs): \$22,000 Professional services (reporting costs and workshop expenses): \$20,000 Total inputs for AA 1.4: \$406,500
Outcome 2 - Effective techniques for PA management and biodiversity conservation have been	<ul style="list-style-type: none"> By end of Year 4, local cadres and managers at project sites are trained in ecosystem-based management and have been exposed to examples of international best practices By end of Year 2, baseline monitoring reports on biodiversity dynamics and natural resource management are available for each project site 	2.1 Training of local cadres and managers in ecosystem planning and management	<u>Activity Area 2.1 Inputs</u> <ul style="list-style-type: none"> 71600 - Travel (Study tours, fellowships & workshops for MAAR & MLAE field staff): \$172,000 71300 - Local consultants (Workshop organization for MAAR & MLAE): \$45,000 71600 - Travel (Mission costs/ local travel): \$17,000 74000 - Miscellaneous (Related expenses): \$35,000 Total direct inputs for AA 2.1: \$269,000

Intended Outputs	Output targets for 2003-2009	Indicative Activities / Activity Areas	Inputs ¹
demonstrated through the design and implementation of management plans at three sites	<ul style="list-style-type: none"> By end of Year 2, integrated management plans are agreed at each site. Plans may be updated annually on a rolling basis thereafter Management actions are implemented in accordance with management plans 	2.2 Implementation of biodiversity monitoring programmes	<u>Activity Area 2.2 Inputs</u> <ul style="list-style-type: none"> 71300 - Local consultants: (i) TOR # 15.1: Socio-economist, baseline indicators; (ii) TOR # 15.2: Forest ecologist - baseline indicators; (iii) TOR #15.3: Follow-up indicator surveys. Total funding: \$42,000 71600 - Travel (Mission costs/ local travel): \$32,000 72100 - Contractual services - Companies (TOR #22: Ecological monitoring and data management. \$74,000 72200 - Equipment (for ecological monitoring and data management). \$38,000 <p style="text-align: right;">Total direct inputs for AA 2.2: \$186,000</p>
		2.3 Development of site management plans	<u>Activity Area 2.3 Inputs</u> <ul style="list-style-type: none"> 71200 - International consultants (TOR#13: Management planning expert): \$89,100 71300 - Local consultants (TOR # 16.7: Management planning experts): \$87,000 71600 - Travel (Mission costs/ local travel): \$30,000 72100 - Publication (management plan): \$9,000 <p style="text-align: right;">Total direct inputs for AA 2.3: \$215,100.</p>
		2.4 Implementation of site management plans	<u>Activity Area 2.4 Inputs</u> <ul style="list-style-type: none"> 72100 - Contractual services – companies: (i) SC#7-9/TOR #23 - Implement new management plan activities. \$375,900 71600 - Travel (Mission costs/ local travel): \$21,000 72200 – Equipment: \$50,000 <p style="text-align: right;">Total direct inputs for AA 2.4: \$446,900</p>
Outcome 3 - Sustainable use of natural resources in and around protected areas has been	<ul style="list-style-type: none"> Examples of participatory management mechanisms and stakeholder feedback systems are incorporated into management plans and operations. 40% of rural and Bedouin communities involved in sustainable use of the natural resources in the 3 sites by end of the project 	3.1 Assessment of local community relationships with demonstration sites and site resources	<u>Activity Area 3.1 Inputs</u> <ul style="list-style-type: none"> 71300 - Local consultants (TOR # 17.14: Traditional community knowledge gathering). \$27,000 71600 - Travel (Mission costs/ local travel): \$8,000 72100 - Contractual services - Companies (TOR #25: In-depth socio-economic assessments, sites 1-3: \$102,000 <p style="text-align: right;">Total direct inputs for AA 3.1: \$137,000</p>

Intended Outputs	Output targets for 2003-2009	Indicative Activities / Activity Areas	Inputs ¹
demonstrated through the development and implementation of a programme for alternative sustainable livelihoods and community resource management		3.2 Site management plans and operational actions that address threats arising from local community activities in and around site areas	<u>Activity Area 3.2 Inputs</u> <ul style="list-style-type: none"> • 71300 - Local consultants: TOR #16.1: Socio-economist - baseline indicators). \$12,000. • 72100 - Contractual services – Companies: TOR #22: Ecological and socio-economic monitoring and data management. \$57,047 <p style="text-align: right;">Total direct inputs for AA 3.2: \$69,047</p>
	<ul style="list-style-type: none"> • 	Alternative livelihood activities and opportunities are made available to local communities where required	<u>Activity Area 3.3 Inputs</u> <ul style="list-style-type: none"> • 71200 - International consultants: TOR#14: Micro-credit and micro-enterprise specialist. \$25,000 • 71300 - Local consultants: TOR #11: Socio-economic specialist. \$94,080 • 71600- Mission costs/ local travel: \$35,000 • 72100 - Contractual services – Companies: TOR #25: Micro-credit and micro-enterprise development. \$396,000 <p style="text-align: right;">Total direct inputs for AA 3.3: \$550,080</p>

II.b Summary and Detailed Budgets

This section presents summaries of the GEF and UNDP cash contributions as well as Government's in-kind contribution.

i. GEF cash contribution (US\$)

Budget line	Description	Amount
71200	International consultants	348,621
71300	Local consultants	782,000
71400	Contractual services – individuals	96,929
71600	Travel	470,000
72100	Contractual services – companies	1,285,900
72200	Equipment	158,000
74000	Miscellaneous	75,000
74100	Professional services	75,400
	TOTAL	3,291,850

ii. UNDP cash contribution (US\$)

Budget line	Description	Amount
71200	International consultants	86,360
71300	Local consultants	256,080
71400	Contractual services – individuals	40,000
71600	Travel	35,000
72100	Contractual services – companies	521,047
72200	Equipment	32,316
74000	Miscellaneous	16,710
74100	Professional services	12,487
	TOTAL	1,000,000

iii. Government in-kind contribution

Personnel	640,100
Subcontracts	330,683
Training	157,217
Equipment	845,000
Miscellaneous	434,000
TOTAL	2,407,000

Additional budgetary details are found in the following locations in the project document:

- **Annex 1.2** (see separate spreadsheet file) presents the project's **Total Budget and Workplan** as well as **Annual Budgets and Workplans**, which present financial details at the level of individual budget lines, organized by Activity Area and Outcome.
- **Annex 1.3** presents a further breakdown of the Government in-kind contribution.

- **Part IIa.** Presents the project's **Strategic Results Framework**, which presents the same information on project inputs, though here grouped and summed within each Activity Area by input type (International consultants, Contractual services, etc.).
- **Annex 1.1** provides **Terms of Reference** for project staff, consultants, sub-contracts, etc. TORs for consultants and sub-contracts provide the item-level budgets, which can be useful in cases where individual sub-contracts (see TORs #17-19 and 22) are funded from more than one Activity Area.

Part III. Management Arrangements

III.a Key national and international agencies²

1. The major national and international agencies having roles in project implementation and oversight are identified below.

i. THE EXECUTING AGENCIES

2. The responsibilities of the **Ministry of Agriculture and Agrarian Reform (MAAR)** and the **Ministry of Local Administration and Environment (MLAE)** as the national executing agencies (or the "Designated Institutions" in UNDP terminology) will include:

- Jointly selecting, in co-operation with UNDP, a **National Project Director (NPD)** who will be responsible, as Director of the **Project Co-ordination Unit (PCU)** for overall project implementation;
- Individually selecting, from within their respective Ministries, **National Project Managers (NPMs)**, who will be responsible for co-ordinating their respective Ministry's participation in the project.
- Planning for and monitoring the technical aspects of the project, including regular site visits and monitoring progress benchmarks and outputs,
- Preparation and submission of periodic progress reports, and regular consultations with beneficiaries and contractors;
- Procuring goods and services on a transparent and competitive basis, e.g., review and approval of TOR/specifications for personnel/contractors/vendors and required bidding documentation, and awarding and entering into contracts of recruitment or procurement;
- Chairing the **Project Steering Committee (PSC)** and annual **Tripartite Review (TPR)** meetings;
- Maintaining a separate project account for the accountability of project funds;
- Ensuring advanced funds are used in accordance with agreed work-plans and project budget;
- Preparing, authorizing and adjusting commitments and expenditures; ensuring timely disbursements, financial recording and reporting against budgets and work plans (in English); they will provide the Resident Representative with certified periodic financial statements, and with an annual audit of the financial statements relating to the status of UNDP (including GEF) funds according to the established procedures set out in the Programming and Finance manuals. The Audit will be conducted by the legally recognized auditor of the Government.

² Project organizational structure is found in annex 1.7

- Managing and maintaining budgets, including tracking commitments, expenditures and planned expenditures against budget and work plan (in English);
- Mobilizing and coordinating the financing from UNDP/GEF and UNDP Syria with that from other sources, including from Government itself;
- Maintaining productive, regular and professional communication with UNDP and other project stakeholders to ensure the smooth progress of project implementation;
- Co-ordinating with all relevant local authorities at project demonstration sites;
- Ensuring the full co-operation and participation of MAAR and MLAE offices and units at Governorate level and below.

ii. THE GEF IMPLEMENTING AGENCY: UNDP

3. **The United Nations Development Programme (UNDP)** is the GEF implementing agency for the present project. This role gives UNDP a number of important responsibilities, which are outlined below according to the relevant UNDP office:

- UNDP Country Office in Syria:³ **UNDP Syria** will maintain day-to-day oversight responsibility for project implementation and direct responsibility for fulfilling the duties and obligations of a GEF Implementing Agency. It will provide technical and administrative backstopping to the PCU to ensure results-oriented management and proper administration of funds. It will maintain project accounts, facilitate staff recruitment and procurement processes and monitor resource mobilization of baseline and co-finance as defined in the project brief and document. Financial transactions will be subject to annual audits undertaken by internationally certified auditors.

UNDP Syria will oversee and verify the proper use of funds through: the “cash advance request”; quarterly workplans; quarterly financial reports; Combined Delivery Reports (and/or other reports generated from UNDP’s project management software); budget revision approval; periodic visits to MEW and the PCU; regular communication with the NPD and project staff; site visits; and dialogue with project stakeholders.

UNDP Syria will participate in project work planning exercises, **Project Steering Committee (PSC)** meetings and monitoring missions. The office will introduce and sensitize project staff and consultants to UNDP work planning, adaptive management and financial reporting requirements, formats and processes, particularly during the **Project Inception Phase (PIP)**. UNDP may provide additional assistance upon request by Government, through Letters of Agreement for Support Services (as per the UNDP Programming Manual).

- UNDP-GEF Regional Co-ordination Unit (RCU), Beirut and UNDP/GEF Core Unit, New York: UNDP-GEF’s **Regional Co-ordination Unit (RCU)** for Arab States, and in particular its Regional Co-ordinator for Biodiversity and International Waters, is responsible for project oversight, ensuring that the project maintains principles of incrementality while achieving global environmental benefits. The UNDP/GEF Regional Co-ordinator has an important role in monitoring project implementation and in ensuring that GEF funds are used in accordance with GEF eligibility rules, policies and norms. The Regional Co-ordinator will serve as a key link between UNDP Syria and the GEF, advising the former on the nature of UNDP’s responsibilities as an officially designated

³ See Annex 1.1.1, TOR #6 for a complete TOR for the UNDP Country Office in Syria.

GEF “Implementing Agency” and the appropriate means of fulfilling these. Finally, the UNDP/GEF Executive Coordinator in New York will report regularly on project delivery to the GEF Secretariat and GEF Council.

III.b Project structures

i. PROJECT CO-ORDINATION UNIT (PCU)⁴

4. A **Project Co-ordination Unit (PCU)** will be established in Damascus in the Directorate of Biodiversity and Protected Areas (Ministry of Local Administration and Environment). The PCU will be led by a **National Project Manager (NPD)**, who will be selected by a panel established for this purpose, with participation by the main project partners. Once selected, the NPD, with the technical and contract-issuing support of UNDP Syria and UNOPS, will recruit PCU staff members, including a Deputy NPD and several support staff.

5. Small sub-offices of the PCU will be established within the relevant Forestry Department offices in Lattakia, Hama and Hassakeh) Both the Damascus and site-based offices will need to have adequate facilities for meetings.

6. PCU staff will be hired using standard hiring procedures, including a transparent process of open advertisement and individual project contracts for all project-funded positions. The PCU will invite UNDP to utilize its networks and experience in recruiting international positions to ensure best available expertise is hired.

ii. PROJECT STEERING COMMITTEES⁵

7. A **Project Steering Committee (PSC)** will meet on an annual basis with the role of overseeing project planning, implementation and performance. It will consist of national-level representatives from each of the main project partners and other key agencies, as well as a representative from each of the **Sub-Steering Committees (SSCs)**. The PSC will be responsible, *inter alia*, for adopting annual work programmes prepared by the PCU. It will monitor the project’s implementation to ensure timely progress in attaining the desired results, and efficient coordination with other projects.

8. The PSC will be chaired by the Minister of Local Administration and Environment and will consist of two members of MLAE and MAAR at the level of deputy ministers in addition to the projects governmental coordinators, Sub-steering Committee (SSC) chairpersons (3) and one member from each of the following organizations:

- UNDP.
- Commission of State Planning
- Ministry of Tourism
- Farmers’ Union
- Women’s Union
- Ministry of Education

⁴ TOR for the PCU are found in Annex 1.1.1, TOR #2.

⁵ TOR for the PSC are found in Annex 1.1.1, TOR #3.

9. The project will also have **Sub-steering Committees (SSCs)** at each project site.⁶ These will comprise representatives from the formal structures of government, other stakeholders in each site and at least one member of each **Advisory Committee of Direct Resource Users** (see below). The presence of village leaders within these sub-steering committees would be highly desirable. These committees will provide guidance to project activities, serve as one of the main vehicles for stakeholder input and review, and approve and monitor the annual workplan for each project site. Their manoeuvrability and degree of freedom will be limited by the boundaries given by the overall framework of activities defined by the project document and the PSC.

iii. **ADVISORY COMMITTEES OF DIRECT RESOURCE USERS**⁷

10. As other experiences suggest, long-term resource use and biodiversity conservation have a better chance of success if genuine avenues are available for the participation of local stakeholders in the management of biodiversity resources. Consultations undertaken during the PDF-B stage strongly suggested that resource users whose livelihoods would be most directly affected by the GEF alternative need to have a formal structure for participation and a direct communication link with the local and international experts involved in the management of the project. This formal and direct participation is even more important when resource users appear particularly vulnerable, as has been observed in several project sites.

11. **Advisory Committees of Direct Resource Users** will therefore be established to provide independent inputs into the definition, implementation and evaluation of project activities. As the name indicates, their role will be of an advisory nature and their recommendations will not be binding. However, their recommendations will constitute formal annexes of the project annual review and formal annexes to the minutes of the project sub-steering committee meetings. This should ensure that the opinions and interests of those most vulnerable enter the project's decision-making process.

III.c Project staffing and technical support

i. **NATIONAL PROJECT DIRECTOR (NPD)**⁸

12. The **National Project Director (NPD)** will be responsible for day-to-day project management as head of the PCU. The NPD will ensure smooth implementation of the project in accordance with the project document and UNDP and GEF procedures. He/she shall liaise directly with designated officials of the PSC, existing and potential project donors, and others as deemed appropriate and necessary by the PSC or by the NPD him/herself. He/she shall be responsible for coordinating and overseeing the preparation and delivery of all substantive, managerial and financial reports from and on behalf of the project. The NPD will prepare an annual work plan on the basis of the project brief and project document, under the general supervision of the PSC and in close consultation and coordination with the NPMs and UNDP.

ii. **NATIONAL PROJECT MANAGERS (NPMs)**⁹

13. As the project is being jointly executed by MAAR and MLAE, it has been agreed to have two **National Project Managers (NPMs)**. The NPMs will be designated by MAAR and MLAE

⁶ See Annex 1.1.1, TOR # 4.

⁷ TOR for the Advisory Committee are found in Annex 1.1.2, TOR #5.

⁸ TOR for the NPD are found in Annex 1.1.2, TOR #7.

⁹ TOR for the NPMs are found in Annex 1.1.2, TOR #8.

respectively and will be responsible for carrying out the directives of the PSC and for ensuring the proper implementation of the project on behalf of the Government. In doing so the NPMs will oversee the management, reporting, accounting, monitoring and evaluation of the project and will ensure proper management and auditing of project resources. As the Designated Institutions' formal project representatives, the NPMs are accountable for the successful delivery of expected project outcomes. The NPMs will work closely with the PCU, and in particular the NPD, in assuring the above.

iii. PROJECT IMPLEMENTATION AND MONITORING ADVISOR (PIMA)¹⁰

14. The PCU will receive periodic support from an international **Project Implementation and Monitoring Advisor (PIMA)**, who will carefully monitor and support the implementation of all project components. This expert will be considered as a member of the PCU, and thus will report directly to the NPD. S/he will undertake periodic visits to the PCU and to the project sites in order to review the progress of project implementation as compared with the defined baseline and with respect to the benchmark indicators highlighted in the **Logical Framework Matrix (LFM)**.¹¹ The PIMA will represent one way of introducing international best practices to the project sites. PIMA mission reports will follow an agreed format and will represent an important technical source for keeping the UNDP Syria desk officer and UNDP-GEF Regional Co-ordinator informed concerning developments in project implementation. Support from the PIMA will gradually decline over the course of project implementation, i.e., from four months in Year One to two months in Year Seven.

iv. OTHER PCU STAFF¹²

15. Other PCU staff will include:

- A **Deputy National Project Director (DNPD)**, who will be based in Damascus and whose work will focus on national-level, systemic issues such as those being addressed under Outcome 1. However, s/he will also supervise the Site Managers (see below);
- Three **Site Managers**, who will be site-based and will be responsible for implementation of all site-based activities, including both UNDP- and GEF-funded activities;
- An **Administrative Assistant**;
- A **Contracts Assistant**, and;
- A **Driver**;

III.d. Processes

i. PROJECT INCEPTION PHASE¹³

16. An initial cash advance will be made to undertake a **Project Inception Phase (PIP)**, with the aim of staffing and establishing the PCU, building implementation capacity, preparing a detailed project workplan and undertaking a number of important preparatory tasks.

¹⁰ TOR for the PIMA are found in Annex 1.1.2, TOR #9.

¹¹ See Section 2, Annex 1.

¹² TOR for the DNPD are found in Annex 1.1.2, Annex 10. TORs for other PCU staff will be developed during the PIP in order to allow the NPD maximum input in the process of organizing the PCU.

¹³ TOR for the PIP are found in Annex 1.1, TOR #1.

ii. PROJECT EVALUATION AND MONITORING

17. A draft **Monitoring and Evaluation Plan** has been developed as part of the present document¹⁴ and will be further refined during the PIP.

18. In Addition to the **Monitoring and Evaluation Plan** project management will use the WB/ WWF management effectiveness tracking tool¹⁵.

Part IV. Legal Context

This Project Document shall be the instrument referred to as such in Article I of the Standard Basic Assistance Agreement between the Government of Syria and the United Nations Development Programme, signed by the parties on 1965. The host country implementing agency shall, for the purpose of the Standard Basic Assistance Agreement, refer to the government co-operating agency described in that Agreement.

UNDP acts in this Project as Implementing Agency of the Global Environment Facility (GEF), and all rights and privileges pertaining to UNDP as per the terms of the SBAA shall be extended *mutatis mutandis* to GEF.

The UNDP Resident Representative in Syria is authorized to effect in writing the following types of revision to this Project Document, provided that he/she has verified the agreement thereto by GEF Unit and is assured that the other signatories to the Project Document have no objection to the proposed changes:

- a) Revision of, or addition to, any of the annexes to the Project Document;
- b) Revisions which do not involve significant changes in the immediate objectives, outputs or activities of the project, but are caused by the rearrangement of the inputs already agreed to or by cost increases due to inflation;
- c) Mandatory annual revisions which re-phase the delivery of agreed project inputs or increased expert or other costs due to inflation or take into account agency expenditure flexibility; and
- d) Inclusion of additional annexes and attachments only as set out here in this Project Document.

Part V. Management risk strategy:

Considering that the responsibility of project management lies between the MLAE and the MAAR, a conflict of interest might arise between the two ministries, which could constitute a major risk to the overall implementation. Despite the measures that have been taken in the design stage to address this issue UNDP Syria and UNDP –GEF Regional Co-ordination Unit (RCU) will insure including a section that deals with risk assessment and adaptive management to the APR/PIR report. In addition, UNDP Syria and UNDP –GEF Regional Co-ordination Unit (RCU) with the assistance of external consultant will conduct a full review of the implementation arrangement and the execution capacity of both ministries. According to the APR/PIR and evaluation's findings and in case of a higher risk enhanced supervision measures might be required, including:

¹⁴ The Monitoring and Evaluation Plan is found in Annex 1.5.

¹⁵ The WB/ WWF Management Tracking Tool form is found in annex 1.6

- Mandatory attendance by CO to inception workshops
- Mandatory project visits annually or more often
- More frequent reporting on risk and implementation issues by CO

SIGNATURE PAGE

Number: 227
Title: Biodiversity conservation and protected area management
Duration: 7 years
Countries: Syria
ACC/UNDP (Sub) Sector: G3: Environment
GEF Focal Area: Biodiversity
GEF Operational Programme: OP 1
GEF Implementing Agency: UNDP
Executing Agency: MLAE & MAAR
Estimated Starting Date: July 2004

FINANCING PLAN (IN US\$):	
1 GEF Project/Component	
Project	3,291,850
PDF A	
PDF B	
PDF C:	
Sub-Total GEF	3,291,850
2 Co-financing	
UNDP TRAC	1,000,000
Government (in kind)	2,434,000
Sub-Total Co-financing	3,434,000
TOTAL Project Financing	6,725,850
3 Financing for associated activities if any: 120,000 Euros	

Approved on behalf of the Government

_____ Date: _____

Approved on behalf of UNDP Syria:

_____ Date: _____

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ANNEX 1.1 TERMS OF REFERENCE***1.1.1 Terms of Reference for Project Management – Processes and Structures***

Title	Project Inception Phase (PIP)		
Terms of reference ID#	1	Budget line	Misc.
Type of contract & ID#	NA	Activity Area reference(s)	NA

The **Project Inception Phase (PIP)** is an opportunity for project stakeholders to become acquainted with the project – its agreed strategy, expected outputs and outcomes, risks, etc. It is also an opportunity to finalise any outstanding implementation details and present them to UNDP, MAAR and MLAE for clearance and then the **Project Steering Committee (PSC)** for approval. The PIP also brings new momentum to the project after the relatively quiet period during the project approval process.

UNDP Country office will receive an initial cash advance for the PIP upon submission of the standard Cash Advance Request form for the costs of the deliverables listed below. No additional workplan will be required.

Overview

The **National Project Director (NPD)** is expected to meet with all stakeholders during the Inception Phase. This may be a mix of individual appointments and group meetings and/or workshops. In the spirit of cooperation underpinning this project, all parties should be invited to participate and contribute to the PIP.

The PIP should include formal and informal training for the Project Team by MAAR and MLAE. This should cover an introduction to the ministries, their procedures and arrangements, as well as a sharing of project-specific knowledge from existing MAAR and MLAE initiatives.

The NPD and the rest of the Project Team should also receive training from UNDP. This will include an overview of UNDP rules and procedures from UNDP-Syria, introduction to the office, as well as a briefing on GEF matters from the UNDP-GEF Regional Coordinator.

Once installed in his/her position, the NPD will lead the PIP – with assistance from the **Project Implementation and Monitoring Advisor (PIMA)** and in consultation with the **National Project Managers (NPMs)** – and should refer to all previous project comments, including those of the STAP Roster Expert, GEF Secretariat, UNDP-GEF, and GEF Council members. UNDP will provide copies of all relevant documentation.

The PIP is expected to last approximately 3-4 months. Monthly updates of progress should be provided to the UNDP Resident Representative through meetings at the UNDP office. More regular and informal contact should be maintained through the responsible UNDP Program Officer.

An **Inception Workshop** should be held during Month 3 of the Inception Phase. The NPD and PIMA will be responsible for developing the agenda for this workshop, while the NPD and additional PCU members will help to organize it. This workshop will be an opportunity for all stakeholders to meet within a common forum. Local site-level representatives will need to be chosen in a participatory manner to attend this workshop and the follow-up meeting of the **Project Steering Committee (PSC)**.

The NPD and the PIMA will be jointly responsible for preparation of an **Inception Report**. The draft Inception Report should be shared with UNDP, MLAE and MAAR as soon as it is available and before being circulated to other stakeholders following the Inception Workshop. The agreed draft Inception Report should then be circulated for comments to all stakeholders before a revised final draft Inception Report is sent to PSC members.

The first meeting of the PSC should mark the conclusion of the PIP. The meeting is expected to endorse the contents of the Inception Report and address any remaining institutional issues which may be standing in the way of full project implementation. Preparatory meetings between MAAR, MLAE and UNDP should be held well in advance of the PSC in order to reach agreement on key issues before seeking PSC approval. This will also be an opportunity to clarify UNDP's role in annual workplan reviews, measurement of progress indicators and impact indicators, **Tripartite Reviews (TPRs)** and annual work planning exercises.

Workplan / Checklist

Table 1 below presents a roughly chronological workplan for the period following the approval of the present project document, as marked by the signature of the GEF Executive Secretary.

Inception phase

The expected output of the Inception Phase is an **Inception Report**. The Report is the responsibility of the NPD, with direct support from the PIMA and the project team and co-operation from all project stakeholders. The Inception Report should include the following:

1. *Detailed and final project institutional arrangements*
 - Final level of representation and individual membership of the PSC and confirmation of willingness to participate (written confirmations annexed to report).
 - Draft rules of procedure for the PSC (description of how developed and annex draft rules)
 - Draft procedures for establishment and operation of Sub-Steering Committees (SSCs)
 - A project organizational chart (donors, government, MAAR, MLAE, project bodies, project staff, contractors), including reporting lines
 - An assessment of Government institutional capacities to undertake project execution, and review of capacity building components of project document.
2. *Describe the roles, responsibilities and capacities of project team members, particularly vis-à-vis project outcomes*
 - Final TORs for PCU staff (following review by NPD, clearance by UNDP and NPD)
 - Clarified roles and responsibilities of all participants (PIMA, PCU, MAAR, MLAE, UNDP, Local Government, etc.)
 - Identified links and coordination between project positions and activities
 - Link each project position to the workplan and delivery of project outcomes
 - Strengthen links to project stakeholders (particularly national and local government, as well as local communities)
 - Describe training provided in required UNDP reporting and project management requirements, as well as general GEF expectations.

Table 1: Inception Phase Checklist

By end of month ...	Activity	Responsibilities	✓
1	Cash advance provided to UNDP Syria to cover costs of inception phase		
1	Official nomination of National Project Managers (NPMs) by MAAR and MLAE	MAAR, MLAE	
1	Joint selection and recruitment of National Project Manager (NPD)	UNDP Syria (provides contract), MAAR, MLAE	
2	Preparation of office equipment and vehicle procurement specifications	NPD, UNDP Syria	
2	Selection and recruitment of remaining PCU staff members	NPD (recommends), MAAR & MLAE (clear), UNDP Syria (clears and provides contract)	
2	Installation of project team within Damascus offices	MAAR, MLAE	
2	Review the capacity of MLAE, MAAR and the PCU to provide project implementation services and day-to-day project management	UNDP (including UNDP-Syria's Management Support Unit and UNDP/GEF's RCU in Damascus)	
3	First mission of PIMA	UNDP to provide contract	
3	Training of PCU, MLAE and MAAR staff in UNDP processes and procedures	UNDP	
3	Organization of National Inception Workshop	PCU (organizes), UNDP, MAAR & MLAE (support as necessary), UNDP-RC (attends)	
3	First meeting of the PSC (immediately following Inception Workshop), thereafter on semi-annual basis	PCU (co-ordinate), MAAR, MLAE	
4	First meetings of Sub-Steering Committees	PCU (co-ordinate), MAAR, MLAE	
4	Preparation of draft and final Inception Reports	PCU	

3. *Planning and preparation for Year 1 of the project*

- A detailed workplan for the first year of implementation.
- A project budget revision if necessary.
- Detailed and finalised TORs for all sub-contracts to be issued during Year 1 in-line with the information provided in the Project Document.
- A Project Operations Manual (in English and Arabic) and description of training provided
- Status update on all sources of co-financing (based on detailed discussions with relevant project managers, etc.). To include latest activities, planning, links with GEF project, etc

4. *An Adaptive Management framework for the implementation of the project*

- Annual work planning process, linked to the rolling workplans. Should include the setting of yearly targets/milestones that are understood by all stakeholders
- Clear process for monitoring workplan implementation
- Links to project outcome indicators (impact indicators), progress indicators and the Logical Framework

- Identify significant Project Risks (possible barriers to successful project implementation and identified externalities that may reduce project effectiveness). Prepare a detailed risk management strategy for project implementation
- Review the project's Monitoring Plan and expand if necessary. Ensure there are measurable indicators of impact at the Output, Purpose and Goal levels of the LogFrame. Ensure baseline data are in place for all indicators. Review the progress indicators set out in the LogFrame and improve as necessary.

Title	Project Co-ordination Unit (PCU)		
Terms of reference ID#	2	Budget line	Misc.
Type of contract & ID#	NA	Activity Area reference(s)	Misc.

The main office of the **Project Co-ordination Unit (PCU)** will be established in Damascus. Sub-offices will be located at each project site to provide office space for project staff and consultants while in the field. Both the Damascus and site offices will also need to have adequate facilities for meetings.

The PCU will ensure that project implementation proceeds smoothly through well-written workplans and carefully designed administrative arrangements that meet UNDP's requirements.

The Project Co-ordination Unit will be comprised of:

1. National Project Director (NPD) (see below, TOR #6)
2. Project Implementation and Monitoring Advisor (PIMA) (see below, TOR #7)
3. Site Managers (SMs) (see below, TOR #8)
4. Administrative Assistant
5. Contracts Assistant
6. Driver

The responsibilities of the PCU and its sub-offices, in association with the implementing agencies, will include the following:

- to manage day-to-day implementation of the project, coordinating project activities in accordance with the rules and procedures of UNDP/GEF and based on the general guidance provided by the Project Steering Committee (PSC);
- to provide overall project co-ordination, while acting as an independent and unbiased guarantor of co-operation and information exchange;
- to convene quarterly Project Implementation Meetings (PIMs), in Damascus and at project sites, involving project governmental coordinators, national project managers and site managers, in order to review progress in implementing project workplans;
- to ensure, together with UNDP, that specified tasks are outsourced to suitable national and international consultants and/or sub-contractors through competitive bidding processes. PCU responsibilities in this regard include development of bidding documents and terms of reference;
- to organize project-level meetings and workshops, e.g., inception workshop, Project Steering Committee (PSC) meetings, etc.;
- to work closely with UNDP Syria in organising and providing technical and logistic support and coordination to all missions and assignments by international and national consultants;
- to develop, in co-operation with MAAR and MLAE as appropriate, details of equipment procurement, and;
- to prepare overall project reporting.

Title	Project Steering Committee (PSC)		
Terms of reference ID#	3	Budget line	Misc.
Type of contract & ID#	NA	Activity Area reference(s)	Misc.

The **Project Steering Committee (PSC)** will provide overall guidance and support to project implementation activities. The Government of Syria and UNDP will establish the PSC upon signature of the project document. Participating institutions (see below) will nominate representatives to the PSC in writing during the **Inception Phase**. Each PSC member must be sufficiently senior so that the individual has sufficient authority to make decisions on behalf of the institution or agency that s/he represents.

The first meeting of the PSC will take place towards the end of the Inception Phase, or approximately four months following project signature. By this time, staff of the **Project Coordination Unit (PCU)** will have been recruited, and the first **Annual Workplan** (see below) will have been prepared by them, together with draft **Rules of Procedure** for PSC meetings. **Annual PSC Meetings**, each two days in duration, will continue being held thereafter. Six PSC meetings are planned during the life of the project.

The membership of the PSC will consist of one representative from each of the following institutions:

1. Ministry of Local Administration and Environment
2. Ministry of Agriculture and Agrarian Reform
3. United Nations Development Programme
4. State Planning Commission
5. Ministry of tourism
6. Ministry of education
7. Ministry of education
8. Heads of sub regional steering committees
9. Women's Union (representatives of each site)
10. Farmer's Union (representatives of each site)
11. others might be defined later

The **National Project Director (NPD)** supported by the **Project Implementation and Monitoring Advisor (PIMA)** and other PCU staff, will act as Secretary to the PSC. At least two weeks prior to each PSC meeting (with the exception of the first meeting), the NPD will be responsible to disseminate a written **Annual Report** to all PSC members. This report will detail the activities and achievements of the project during the preceding year and compare these with the goals set out during that year's annual workplan. The Annual Report will highlight both achievements as well as difficulties encountered and will analyze the reasons for success / failure.

The NPD will likewise present an Annual Workplan prior to the PSC meeting. This workplan will represent an elaboration and detailing of the activities described in the project brief and project document for the coming year.

In cases where the workplan proposes a deviation from the general course outlined in these documents, it should present clear justification for such changes, as well as reference to further documentation, i.e., Quarterly and Annual Reports, etc., supporting the proposed changes. These

practices are designed to ensure that the work undertaken by the project team follows the overall course laid out in the project brief and project document, while also allowing for flexibility and adaptation to unexpected conditions and changes.

The specific tasks to be achieved during each Annual PSC Meeting include the following:

- to adopt Rules of Procedure (at its first meeting);
- to review and assess the progress of the Project and its components – particularly with respect to its **Logical Framework Matrix (LFM)** and associated **Process and Impact Indicators** – as highlighted in the Annual Report;
- to provide policy guidance and decisions to the NPD and the PCU team;
- to review and approve the Annual Workplan (including updated budgets of the Project and its activities) and the preceding year's Annual Report, and;
- to ensure mainstreaming of project activities and outcomes into Government plans, policies and actions.

Although the PSC will have decision-making power as well as advisory functions, it will not have the authority to alter the project goal, outcomes or Activity Areas. However, the PSC may alter specific project activities and/or implementation arrangements, including arrangements for sub-contracts (ensuring due process is followed), if there is clear and consistent evidence against project output indicators (based on progress reports and adaptive management outputs) that the project activities are failing to deliver project outputs, or the sub-contracts are failing to meet their obligations under their Terms of Reference.

In addition to participating in the Annual PSC Meetings, each PSC member will have the following year-round responsibilities with respect to the project:

- to champion the progress of project activities within the PSC member's institution / government department;
- to provide strategic direction on the workplan;
- to support the cross-sectoral approach of the project by creating mechanisms for interaction with NGOs and other stakeholders;
- to continue to seek additional funding to support the outputs and activities of the project beyond the lifespan of GEF funding, and;
- to disseminate lessons learned and encourage replication of best practices among the PSC member's institution/government department and relevant constituents.

Title	Sub-Steering Committees		
Terms of reference ID#	4	Budget line	Misc.
Type of contract & ID#	NA	Activity Area reference(s)	Misc.

The project will have **Sub-steering Committees (SSCs)** at each project site. These will comprise representatives from the formal structures of government, other stakeholders in each site and at least one member of each **Advisory Committee of Direct Resource Users** (see below). The presence of village leaders within these sub-steering committees would be highly desirable. These committees will provide guidance to project activities, serve as one of the main vehicles for stakeholder input and review, and approve and monitor the annual workplan for each project site. Their manoeuvrability and degree of freedom will be limited by the boundaries given by the overall framework of activities defined by the project document and the PSC.

Title	Advisory Committees of Direct Resource Users		
Terms of reference ID#	5	Budget line	Misc.
Type of contract & ID#	NA	Activity Area reference(s)	3.1

As other experiences suggest, long-term resource use and biodiversity conservation have a better chance of success if genuine avenues are available for the participation of local stakeholders in the management of biodiversity resources. Consultations undertaken during the PDF-B stage strongly suggested that resource users whose livelihoods would be most directly affected by the GEF alternative need to have a formal structure for participation and a direct communication link with the local and international experts involved in the management of the project. This formal and direct participation is even more important when resource users appear particularly vulnerable, as has been observed in several project sites.

Advisory Committees of Direct Resource Users will therefore be established to provide independent inputs into the definition, implementation and evaluation of project activities. As the name indicates, their role would be of an advisory nature and their recommendations would not be binding. However, their recommendations would constitute formal annexes of the project annual review and formal annexes to the minutes of the project sub-steering committee meetings. This should ensure that the opinions and interests of those most vulnerable enter the project's decision-making process.

Representative from farmers' and herders' associations are good candidates for the above committees. Other likely members include representatives from groups engaged in educational or social / organizational activities such as the party youth groups (*Shabibah*) and the womens' union. Their role can be of particular importance where raising public awareness is an issue both within the stakeholder community and among the general public as a whole.

Certain key stakeholders from within the community should also be considered as candidates. Often, the latter group is not organized by means of association or other similar structures. The project will have to undertake an effort either to foster the creation of associations or help the group in selecting candidates that fully represent their interests in the project's decision-making process. The committees might also include representatives from the tourism sector since tourism is expected to play an important role in presenting alternative sustainable means of livelihood.

The objective of having the Advisory Committees and the Sub-Steering Committees acting simultaneously is two-fold. The first objective is to ensure the participation of stakeholders in the formal project decision-making process (mainly done through the Sub-steering committees). The sub-steering committees are endowed with formal tools to influence the design and implementation of project activities. The second objective is to provide a backup channel ("advisory committees of direct resource users") that can ensure that the interests of most vulnerable groups are not diluted whenever sub-steering committees comprise relatively big numbers of participants or present significant power asymmetries. Together, these structures are aimed at ensuring that project management units have access to inputs from all relevant stakeholders, that stakeholders have the tools to participate in project activities, and that the most vulnerable groups are heard and not disproportionately affected by any alternative.

Title	UNDP Country Office		
Terms of reference ID#	6	Budget line	NA
Type of contract & ID#	NA	Activity Area reference(s)	NA

Under its agreement with the Global Environment Facility, UNDP (and Executing Agency/ies) provide a core set of services for each UNDP/GEF project. The following TOR describes these services, which are to be carried out in accordance with UNDP's and the respective executing agency's operational policies and procedures. This includes UNDP applying its standard due diligence requirements related to financial, economic, legal, environmental, social, and technical aspects.

Project Approval and Start-up

- Prepare legal and other documentation for approval by IA approval authority.
- Assist project proponent to establish project management structure in country.
- Assist project management agency to draft TORs and select experts for implementation.
- Facilitate project management agency with project start-up workshop.

Outputs:

- ⇒ Project Document for Signature by Country.
- ⇒ Project Initiation Report.

Implementation Supervision/Management Oversight

Day-to-day implementation support

Recruitment of Consultants (International and National)

- Assist in conducting search for suitable candidates (advertisement, website, rosters)
- Assist in preparing TORs and be involved in interviewing candidates
- Assist in issuing contract (when necessary)
- Authorize salary/consultancy fee/missions
- Supervise consultant's work, review and approve outputs

Sub-Contracts

- Assist in identifying suitable subcontractors (advertisement, website, rosters)
- Assist in preparing/finalizing TORs and evaluating bids
- Assist in issuing contracts (when necessary)
- Supervise sub-contractors' work, ensuring inputs as per contract TORs
- Ensure payments are made accordingly and that milestones are met
- Provide critical review of sub-contractors performance

Project Co-ordination/cross-project learning

- Monthly meetings with project implementing agency to ensure smooth project implementation
- Participate in Steering Committee meeting to ensure smooth project implementation

- Participate in Technical Committee meeting to ensure smooth project implementation
- Keeping clear communications and taking necessary interventions to ensure coordination between different co-financiers in implementing and completing project activities
- Facilitate cross-sectoral work of the project by lending UNDP's support to these activities and this goal.
- Encourage and enable cross-project learning among the project and UNDP's other projects;
- Lend UNDP's support to and take part in project round tables and workshops
- Maintain contacts with other environmental and development projects supported by various donors and cultivate cooperative ties with this project.
- Strengthen project's relationships with the private sector by lending UNDP's support, prestige to project efforts in this regard.

Training/Workshop

- Making appropriate arrangements for the logistical and technical support of the training and workshop activities

Awareness

- Disseminate relevant information to host/other countries in the region through UNDP COs
- Share project best practices with other UNDP offices with project interest on energy portfolio
- Share training materials from training workshops for other similar workshops organized by the UNDP CO
- Disseminating information through website created under the project
- Create links between this project and other GEF projects, and linking up national and international scientific communities that are addressing similar issues
- Working with media and journalists to publicize project activities.

Equipment/Office premises:

- Review & approve specifications
- Identify suppliers of goods and services
- Assist in evaluating contract and awarding contract (when necessary)
- Undertake Customs clearance
- Assist with procurement of services (furniture in setting-up office, telephone etc.)
- Authorize budgets for rent and payment.

Project implementation supervision

- Participate in every steering committee meeting
- Mount at least one supervision mission per year, including briefing operational focal points on project progress.
- Provide technical guidance, as necessary, for project implementation.
- Field Visits: Ensuring visits to the project at its site at least once a year; preparing and circulating reports no later than two weeks after the end of the visit.
- Provide technical backstopping when needed and play an ongoing trouble shooting role

- Ensure any project document revisions are done properly and in-line with GEF requirements by consulting UNDP-GEF colleagues.
- Review, edit, respond to project reports
- Conduct policy negotiations when required.

Financial Management and Accountability

- Make direct payments and ensure flow of funds for project activities;
- Pay advances to the Executing Agency and review financial reports.
- Training of staff of implementing agency on financial disbursement and reporting
- Oversee financial monitoring, record keeping, and reporting.
- Make budget revisions in cooperation with Executing Agency.
 - ❖ 1st. revision within two months of the signing of the project document to reflect the actual starting date and to enable the preparation of a realistic plan for the provision of inputs for the first full year.
 - ❖ Annual revision approved by 10 June of each year to reflect the final expenditures for the preceding year and to enable the preparation of a realistic plan for the provision of inputs for the current year.
- Ensure annual audits of NEX projects are completed and the audited financial statements together with the audit report reach UNDP headquarters (Office of Audit and Performance Review) no later than 30th April.
- Continue ongoing fundraising efforts for the project's LTFM.

Reporting, Monitoring, Evaluation

Technical Reporting

- Prepare annual project implementation reports for submission to GEFME
- Monitor the implementation of the workplan and timetable
- Ensure progress reports are prepared and submitted timely
- Ensure Annual Programme Report (APR) are prepared and submitted to UNDP CO
- Ensure their annual preparation of APRs & their completion by the due date, two weeks before the TPR to UNDP-GEF.
- Prepare and participate in Project Implementation Reviews (PIR) and ensure their preparation submission by the due date.

Monitoring and Evaluation

- Undertake project monitoring/site visits
- Organize TPR meeting, participate and ensure that decisions are taken on important issues.
- Contribute to preparation of TPR reports
- Ensure the development of clear guidelines for assessing project progress and impact, for improving monitoring, and for identifying lessons learned and including them in the following years' workplans
- Undertake mid-term review, including possible project restructuring. Send copy to GEFME
- Prepare and finalize TOR for evaluation (mid-term and final evaluation)
- Make appropriate logistical and technical arrangements for the evaluation team and mission.

COMPLETION

- Prepare Project Completion Report/Terminal Evaluation, and submit the report to GEFME.

- Operational completion activities. Determining when the project is operationally complete and advising all interested parties accordingly.
- Prepare project closing documents
- Ensure projects are financially completed no more than 12 months after operational completion by ensuring the final budget revision is promptly prepared and approved.

Output

- ⇒ Mid-term Review Report
- ⇒ Annual Project Implementation Reports
- ⇒ Independent evaluation reports
- ⇒ Project Completion/Terminal Evaluation Report

1.1.2 Terms of Reference for Project Staff

Title	National Project Director (NPD)		
Terms of reference ID#	7	Budget line	71300
Type of contract & ID#	One-year renewable	Activity Area reference(s)	1.5,2.5,3.4

The **National Project Director (NPD)** will be responsible for day-to-day project management as head of the **Project Co-ordination Unit (PCU)**. The NPD will ensure smooth implementation of the project in accordance with the project document and UNDP and GEF procedures. He/she shall liaise directly with designated officials of the **Project Steering Committee (PSC)**, existing and potential project donors, and others as deemed appropriate and necessary by the PSC or by the NPD him/herself.

He/she shall be responsible for coordinating and overseeing the preparation and delivery of all substantive, managerial and financial reports from and on behalf of the project. He/she will supervise all project staff in the PCU as well as the project budget. The NPD will prepare an annual work plan on the basis of the project document, under the general supervision of the PSC and in close consultation and coordination with the NPD and UNDP.

Overall duties

The NPD will have the following responsibilities:

1. Ensure smooth implementation of the project in accordance with the project document and UNDP's procedures.
2. Supervise all project staff in the PCU as well as the project budget. Certify attendance sheets, and oversee the establishment and operation of a project personnel performance assessment scheme.
3. Work with project staff members and consultants to help each one utilize a practical and simple method for helping to determine the impact of project activities – of training activities, workshops and the process of developing new laws and policies.
4. Coordinate, monitor and be responsible to the PSC for implementation of the Work Plan;
5. Ensure consistency and integration among the various program elements and related activities provided or funded by various sources (GEF, Government and UNDP);
6. Work with UNDP Damascus to prepare Terms of Reference for consultants and contractors;
7. Foster and establish links with other relevant GEF programs and, where appropriate, with other relevant regional programs;
8. Provide technical input to project activities where appropriate;
9. Be an ex-officio member of the PSC and be responsible for the preparation, organization, and follow-up necessary to the effective conduct of PSC business;
10. Submit quarterly reports of relevant project progress and problems to the PSC;
11. Organize round-table discussions on project successes and failures, as per the workplan
12. Encourage an atmosphere of adaptive management in the project office, where people focus on meaningful results “on the ground”, rather than simply the spending of funds or reports.
13. Oversee an effective ongoing project monitoring program and development of a process whereby the project assesses best practices as it gains experience.
14. Collaborate with UNDP to ensure that specified project tasks are outsourced to suitable consultants and/or organizations.

Specific roles related to implementation of project Activity Areas

A key role of the NPD, and of the PCU as a whole, will be to supervise and co-ordinate the inputs of various national and international consultants. However, it will not be possible to rely on short-term consultants to undertake all substantive project activities. It will therefore be essential for the NPD, the **Deputy National Project Director (DNPD)** and the **Site Managers (SMs)**, as full time technical staff, to have strong technical backgrounds and to utilize these backgrounds in contributing actively to project outputs.

Qualifications

- graduate degree in biodiversity conservation, project management, or some directly related field (e.g. wildlife and fisheries management, natural resource management, natural resource economics, etc.);
- extensive experience in fields related to the assignment;
- at least five years experience as a senior project manager.
- excellent inter-personal, communication and negotiating skills;
- familiarity with the goals and procedures of international organizations strongly preferred, in particular those of the GEF and its partners (UNDP, the World Bank, major NGOs, and potential additional donors);
- good English-language writing skills;
- previous work experience in the region on issues directly related to the project;
- ability and willingness to travel, and;
- demonstrated skills in office computer use - word processing, spreadsheets.

Duty stations

The NPD will be based at the project office in Damascus. However, s/he will make frequent visits to the project sites.

Title	National Project Managers		
Terms of reference ID#	8	Budget line	71300
Type of contract & ID#	Government	Activity Area reference(s)	1.5,2.5,3.4

The **National Project Managers (NPMs)** are ultimately responsible and accountable to UNDP for project implementation on behalf of their respective Ministries (MAAR and MLAE). They will act as focal points and responsible parties for project implementation and will ensure that all Government inputs committed to the project are available in a timely manner. They will also act as approving authorities for staff appointments and selection of international consultants – the latter within their respective components of the project. In principle all decisions have to be consulted and agreed on with both national project coordinators; however, MAAR will have primary responsibility for Outcomes 2 & 3, while MLAE will be responsible for Outcome 1.

The NPMs are state employees and are entrusted with overall guidance and coordination of the project implementation. They are unpaid positions covered by the Government as an in-kind contribution to the project. The NPMs are accountable to Government and to UNDP for production of the project outputs, appropriate use of the project resources provided by GEF and UNDP, and coordination of the UNDP/GEF project with other programmes and projects implemented in Syria in the area of protected area management.

Tasks

In particular the NPMs will:

- approve project work plans, budget revisions and if necessary project revisions;
- chair the project PSC;
- be responsible for coordination of project activities with other involved governmental and non-governmental organizations;
- ensure that national legislation, rules and procedures are fully met in the course of the project implementation;
- approve terms of references, selection of project staff and reports produced by the PCU and the key experts/contractors;
- approve/certify project monitoring reports (APRs), audit reports and evaluation reports;
- facilitate liaison and cooperation with the central Government authorities in the course of the project implementation;
- liaise with UNDP and project partners as required, on a regular basis, to build an effective partnership for the successful delivery of expected project outcomes, and;
- ensure that there is a clear and unambiguous decision-making process for project implementation so that project activities are planned well in advance and necessary resources are available.

The work of the NPMs will be supported by the NPD and the rest of the PCU as well as by the UNDP office in Damascus.

Title	Project Implementation and Monitoring Advisor (PIMA)		
Terms of reference ID#	9	Budget line	71200
Type of contract & ID#	Retainer (?)	Activity Area reference(s)	1.5,2.5,3.4

I. Background

The **Project Implementation and Monitoring Advisor (PIMA)** will represent the primary source of international technical support for project implementation. The PIMA will monitor and support the implementation of all project components, primarily by means of annual visits to Damascus and to the project site. This in-country support will be supplemented by periodic home-based support, which will include responding to technical queries, commenting on technical reports, etc. Despite his/her part-time status, the PIMA will be considered as a member of the **Project Co-ordination Unit (PCU)**, and as such will work closely with the **National Project Manager (NPD)**.

II. Timing, duration and duty stations

The PIMA will be recruited by the project on a retainer basis for a pre-determined number of months annually.¹⁶ A total of 13 months support over the life of the project is envisaged. The majority of support will be provided during annual missions, timed to coincide with major project monitoring events, such as the annual meeting of the **Project Steering Committee (PSC)**. This will be supplemented by ad-hoc, home-based support. The schedule of support will be as follows:

Year	w/m in Syria	w/m home-based
1	3.0	1
2	2.0	1
3	2.0	1
4	1.5	0.5
5	1.5	0.5
6	1.5	0.5
7	1.5	0.5

It is expected that approximately 60% of the time spent in country will be spent at the project demonstration sites, with the remaining 40% spent in Damascus.

III. Description of work responsibilities

Overall, the PIMA will have the following general responsibilities:

1. To ensure that the project maintains strategic direction during implementation and that it becomes an active member of a learning network of GEF projects.
2. To sharpen the project's focus on quality outputs, and to emphasize a learning and adaptive approach to project management and implementation.
3. To introduce international best practices to project managers by serving as a conduit for ongoing UNDP/GEF best practice input to project implementation, monitoring and evaluation. This will include – working in co-operation with **UNDP-GEF's Regional Co-ordination Unit (RCU)** in Beirut – the development of linkages between the project and

¹⁶ It would be useful to engage the PIMA for an initial 3-year period, in order to ensure consistency, i.e., so that a new PIMA does not need to be identified and/or recruited each year.

other UNDP/GEF projects implemented in the Middle East, as well as in other parts of the world.

During annual missions to Syria, the PIMA will have the following specific responsibilities:

4. To liaise with MLAE, MAAR, the PCU and UNDP in order to identify, and find solutions to, problems and challenges facing project implementation;
5. To review the progress of project implementation as compared with the defined baseline and with respect to benchmark indicators highlighted in the Logical Framework Matrix (LFM) (see Section 2 and Section 1, Annex 1.3).
6. To facilitate a learning and adaptive approach to project management and implementation by asking questions of key project personnel, including: “What are we learning and how are we incorporating it into our project implementation process?” and “Are we meeting our indicators of success?”
7. To lead an annual project management and evaluation exercise.
8. Upon request of the NPD, to revise, update, and/or prepare detailed Terms of Reference for positions as they come up for hire during project implementation;
9. To support the development and dissemination of a lessons learned/best practices handbook derived from the project.

Ad-hoc home-based support will include the following:

10. Providing technical comments on draft sub-contract and consultancy reports produced under the project.
11. Responding to technical queries from project partners.
12. Within constraints imposed by communications systems, participate in twice-annual teleconferences / videoconferences with key Syria-based project partners.
13. Other support as requested by the NPD, within the constraints imposed by the availability of working days.

IV. Qualifications

- ⇒ Ability to work in the English language
- ⇒ Detailed knowledge of project design and implementation arrangements and experience with key stakeholders;
- ⇒ At least five years of experience with UNDP and GEF project development and implementation;
- ⇒ Proven experience in successfully working with adaptive management/monitoring & best practice assessment;
- ⇒ Well developed leadership, inter-personal, communication and negotiating skills, as well as a proven ability to work effectively in groups;
- ⇒ Previous work experience in the Middle East;
- ⇒ Post-graduate university education.
- ⇒ Reliability, initiative, thoroughness and attention to detail.

Title	Deputy National Project Director (DNPDP)		
Terms of reference ID#	10	Budget line	71300
Type of contract & ID#	One-year renewable	Activity Area reference(s)	1.5,2.5,3.4

I. Background

The **Deputy National Project Director (DNPDP)** will support the **National Project Director (NPD)** in ensuring day-to-day project management. The DNPDP will help to ensure smooth implementation of the project in accordance with the project document and UNDP and GEF procedures. He/she shall support the NPD in coordinating and overseeing the preparation and delivery of all substantive, managerial and financial reports from and on behalf of the project.

II. Description of work responsibilities

The DNPDP will assist the NPD in implementing the following responsibilities:

1. Ensure smooth implementation of the project in accordance with the project document and UNDP's procedures.
2. At the request of the NPD, assume the latter's responsibilities / authority (signature authority, etc.), as **Acting NPD**, during the NPD's absence from the PCU due to travel, illness, annual leave, etc.
3. Supervise all project staff in the PCU as well as the project budget. Certify attendance sheets, and oversee the establishment and operation of a project personnel performance assessment scheme.
4. Work with project staff members and consultants to help each one utilize a practical and simple method for helping to determine the impact of project activities – of training activities, workshops and the process of developing new laws and policies.
5. Coordinate, monitor and be responsible to the PSC for implementation of the Work Plan;
6. Ensure consistency and integration among the various program elements and related activities provided or funded by various sources (GEF, Government and UNDP);
7. Work with UNDP Damascus to prepare Terms of Reference for consultants and contractors;
8. Foster and establish links with other relevant GEF programs and, where appropriate, with other relevant regional programs;
9. Provide technical input to project activities where appropriate;
10. Be an ex-officio member of the PSC and be responsible for the preparation, organization, and follow-up necessary to the effective conduct of PSC business;
11. Submit quarterly reports of relevant project progress and problems to the PSC;
12. Organize round-table discussions on project successes and failures, as per the workplan
13. Encourage an atmosphere of adaptive management in the project office, where people focus on meaningful results “on the ground”, rather than simply the spending of funds or reports.
14. Oversee an effective ongoing project monitoring program and development of a process whereby the project assesses best practices as it gains experience.
15. Collaborate with UNDP to ensure that specified project tasks are outsourced to suitable consultants and/or organizations.

III. Specific roles related to implementation of project Activity Areas

A key role of the DNPD, and of the PCU as a whole, will be to supervise and co-ordinate the inputs of various national and international consultants. However, it will not be possible to rely on short-term consultants to undertake all substantive project activities. It will therefore be essential for the DNPD, along with the **National Project Director (NPD)** and the **Site Managers (SMs)**, as full time technical staff, to have strong technical backgrounds and to utilize these backgrounds in contributing actively to project outputs.

In the case of the DNPD, both his/her supervisory role vis-à-vis consultants and experts, as well as the relevant area for substantive contributions, will be **Outcome 1 – Policies and institutional systems allow for the wise selection and effective operation of protected areas to conserve globally significant biodiversity**. He/she will therefore have direct operational responsibility for achieving this outcome, using a combination of his/her own inputs and those of the various experts and consultants making contributions under this outcome.

IV. Timing, duration and duty stations

The DNPD will be given an annual contract and will be based at the project office in Damascus. However, s/he will make periodic visits to the project sites.

V. Qualifications

- graduate degree in biodiversity conservation, project management, or some directly related field (e.g. wildlife and fisheries management, natural resource management, natural resource economics, etc.);
- solid experience in fields related to the assignment;
- at least three years experience as a project manager.
- excellent inter-personal, communication and negotiating skills;
- good English-language writing skills;
- previous work experience in the region on issues directly related to the project;
- ability and willingness to travel, and;
- demonstrated skills in office computer use - word processing, spreadsheets.

Title	Socio-economic specialist (SES)		
Terms of reference ID#	11	Budget line	71300
Type of contract & ID#	One-year renewable	Activity Area reference(s)	3.1-3.3

I. Background

The present project has a variety of socio-economic elements that are important to ensuring the project's success. In particular, various possible micro-projects for reducing pressures on demonstration site resources have been highlighted in background studies conducted under the PDF-B.¹⁷ The project will conduct cost-benefit and environmental impact analyses of these interventions prior to funding any of them. A micro-credit programme will be developed to provide seed funding for some of these small projects, and will be made available to all members of the community, making sure there is equitable access by women, different ethnic groups, sedentary vs. mobile populations, etc.

II. Description of work responsibilities

The **Socio-economic specialist (SES)** will be closely involved with all project components with significant socio-economic aspects. His/her specific responsibilities will include the following:

- Oversee implementation of the micro-enterprise development and financing component of the project: Activity Area 3.3, "Alternative livelihood activities and opportunities are identified and made available to local communities where required." This will involve working closely with one or more sub-contractors engaged to implement these activities (see TOR #23).
- Overall support to implementation of socio-economic aspects of the project, particularly activities taking place under AA 3.1 and 3.2.
- Support assessment of socio-economic impacts as measured through project indicators.
- Work closely with other project staff and consultants involved in implementation of relevant activities. These include in particular:
 - the international specialist in micro-enterprise development & credit (see TOR #14),
 - Site Managers (see TOR #12),
 - Government-supported staff and consultants.
- Make regular—roughly quarterly—visits to the each of the project sites. These visits should be followed by reports on project implementation at the sites and recommended actions (adjustments to work plans, etc.)
- Liaise with consultants preparing the site management plans (see TOR #13) to ensure that socio-economic issues are fully covered.

III. Timing, duration and duty stations

The SES will be based in Damascus for the duration of the project. He/she will make periodic visits to the project sites.

IV. Qualifications

- An advanced degree in a field of direct relevance to the present assignment, e.g., economics, sociology, anthropology, etc.
- At least five years of professional experience in a relevant field,
- Excellent communication skills in English and Arabic.

¹⁷ See Section II, Project brief.

Title	Site Managers		
Terms of reference ID#	12	Budget line	71300
Type of contract & ID#	One-year renewable	Activity Area reference(s)	Misc.

I. Background

An important part of the project consists of work being undertaken at demonstration sites. This includes both activities aimed at demonstrating techniques of protected area management (see Outcome 2 of the project brief), as well as support designed to demonstrate the sustainable use of natural resources in and around protected areas (see Outcome 3 of the project brief). This site-based work, which will be funded from three different sources (GEF, Government and UNDP) will need to be carefully managed and co-ordinated. For this reason, the **Project Co-ordination Unit (PCU)**, which will be based in Damascus, will out-post one **Site Manager (SM)** to each of the project sites. The SMs will be based within local offices of the Forestry Department.

II. Description of work responsibilities

Each SM will be responsible to co-ordinate and contribute to all project activities taking place at the demonstration site to which s/he has been assigned. This will include visits by project staff, sub-contractors and consultants to the project sites. In addition, upon the request of the **National Project Director (NPD)** or **Deputy National Project Director (DNPD)**, s/he may periodically be requested to contribute to work at other demonstration sites, in particular in cases where his/her own expertise or the experience at his/her 'home site' may be of direct relevance to problems confronting work at these other sites.

SMs will maintain close contact with the **NPD** and the **DNPD** – the latter their direct supervisor – and will be expected to produce regular reports on progress at their respective sites. They will also make regular—roughly quarterly—visits to the PCU for meetings with their colleagues.

III. Timing, duration and duty stations

The SM position is designed to rotate among the project sites. Thus, each of the three SMs will spent a period of approximately two years at a demonstration site before moving to a new site. By the end of the project, each SM should have spent roughly equal periods of time at each project site. This procedure will ensure cross-fertilization among site-based work as well as helping to avoid overly entrenched relationships with project beneficiaries.

IV. Qualifications

It is important that the three SMs selected should possess a combination of skills in project management and biodiversity and protected area management. If possible, the three SMs should have rather complementary skills, so that each may take the lead within given thematic areas, while also providing support to his/her colleagues at remaining project sites.

During the first two-three years of the project, the SMs may receive additional training as necessary in areas relevant to their responsibilities. This may include brief study tours, visits to other GEF projects in the region, etc.

1.1.3 Terms of Reference for International Consultants

Title	Management Planning Expert (MPE)		
Terms of reference ID#	13	Budget line	71200
Type of contract & ID#	SSA	Activity Area reference(s)	2.3-2.4

I. Background

In addition to strengthened human resources and enhanced data and information flows, improved management at demonstration sites will require effective systems for integrated management planning. Site managers will need support in order to develop medium-term plans for their sites, encompassing biodiversity conservation and remediation goals, and practical strategies for achieving these.

This process will begin with a review and assessment of current management practices and planning at project sites, including policies of restoration using heavy vehicles, afforestation, etc., to assess the suitability and impacts on biodiversity of these measures. This will be followed by development of 5-year management plans for each site, to include issues such as threat removal, sustainable use protocols, development of functional zoning schemes, revisions to job profiles and management structures, proposals for pilot ecological rehabilitation measures and investment plans. It will be important to ensure the consultation and participation of a broad range of stakeholders within this planning process.

Additional activities beyond those identified in the project brief, including infrastructure investments, will be formulated and implemented under the auspices of these management plans. The management plans will also stipulate areas for sustainable use. The management plans will develop appropriate mechanisms for equitable sharing of benefits with local communities in the event that tourism revenues increase. Finally, the plans will stipulate procedures regarding their own periodic updating.

Management plan activities will be designed with the close co-operation and participation of local communities surrounding the project sites. Wherever possible, these communities will also participate in implementation of the management plans, thereby benefiting from enhanced employment opportunities during the period of project implementation.

In preparing the management plan, the consultants will be able to count upon GEF funding for implementation of management plan activities (see TOR #23). In addition, Government co-financing will be available for management plan implementation. These funds have not yet been distributed among the three project sites.

Thus, priority activities should be designed based on the above-described financing envelope. Additional activities may also be proposed within the management plan and put forward to Government and donors for possible leveraged co-financing.

The management plan will be prepared by a team of four consultants – three nationals and one international, the latter the subject of the present TOR. Its development will include a series of consultations with local stakeholders.

II. Description of work responsibilities

The international consultant will undertake two missions to Syria over a roughly 12-month period.

Prior to the first mission, (s)he will receive copies of all project documentation produced to date and will be briefed via teleconference by, *inter alia*, the **Project Implementation and Monitoring Advisor (PIMA)**.

During the first mission, the MPE will:

- meet with Government, UNDP, PMU and protected area staff to discuss and review project outputs to date and goals / objectives for the remainder of the project, in particular future management goals at the demonstration sites;
- hold planning meetings with three national consultants who will already have been recruited for preparation of the management plan, along with Government and UNDP, in order to:
 - a. provide orientation to the work of the national consultants and clarify their TORs,
 - b. develop a detailed outline of the management plan, with designation of responsibilities among all four team members,
 - c. prepare a detailed working plan for the consultancies of the national consultants, along with his/her own contribution, and
 - d. share international experience in developing management plans;
- visit the project sites and participate in a first round of management plan consultations with local stakeholders;
- prepare a final mission report.

The MPE will also be available during the period between his/her missions to have e-mail correspondence with the national consultants concerning any issues that may arise.

Prior to the second mission, the MPE will receive copies of the draft final reports of the national consultants (constituting draft sections of the management plans), as well as other relevant updates.

During the second mission, the MPE will:

- hold debriefing meetings with the national consultants' team for updating on progress in developing the management plans, including reports of consultations held, etc;
- meet with Government, UNDP, PMU and protected area staff to discuss progress in developing the management plan and steps in finalization;
- visit the project sites to participate in a final round of management plan consultations with local and national-level stakeholders.

Within two months following the completion of the second mission, the national consultants will deliver final drafts of their sections of the management plans. These will be integrated and edited

by the MPE and delivered in finalized form as his/her final report no more than three months later.

III. Timing, duration and duty stations¹⁸

The duration of the MPE's assignment will be____, to be provided over a roughly ____-month period. The consultant's time will be roughly allocated between the project sites (c. __ working days), Damascus (c. __ working days) and home-based work, including drafting and finalization of the management plan (____ working days).

The assignment is expected to commence towards the end of Year 2 of the project.

IV. Qualifications

- a. Minimum of 5 years experience in protected area planning and management;
- b. Experience in working with and developing effective partnerships with local communities, NGOs and government agencies;
- c. Knowledge and skills in various aspects of conservation area operations and field management, including participatory approaches in management, operational planning, enforcement, community outreach, conservation awareness building, and conflict resolution;
- d. Good interpersonal skills and a track record in providing on-the-job training;
- e. Excellent English communication skills, with Arabic -language skills a particular advantage.

¹⁸ Duration to be completed with finalization of TOR.

Title	Micro-credit and micro-enterprise specialist (MMS)		
Terms of reference ID#	14	Budget line	71200
Type of contract & ID#	SSA	Activity Area reference(s)	3.3

I. Background

Various possible micro-projects for reducing pressures on demonstration site resources have been highlighted in background studies conducted under the PDF-B.¹⁹ The project will conduct cost-benefit and environmental impact analyses of these interventions prior to funding any of them. A micro-credit programme will be developed to provide seed funding for some of these small projects, and will be made available to all members of the community, making sure there is equitable access by women, different ethnic groups, sedentary vs. mobile populations, etc.

II. Description of work responsibilities

The **Micro-credit and micro-enterprise specialist (MMS)** will be responsible for technical aspects associated with initiating work under Activity Area 3.3 “Alternative livelihood activities and opportunities are identified and made available to local communities where required.” This will involve the following:

- Review relevant reports prepared under the PDF-B phase, including the reports of the socio-economist, sociologist, agronomist, etc.’
- Hold meetings with Damascus-based officials to re-assess their views on socio-economic aspects of the project, including Government’s contribution to the same;
- Visit project sites, accompanied by the **Socio-economic specialist** (see TOR #11) and the relevant **Site Managers** in order to have discussions with local grassroots stakeholders;
- Prepare draft bidding documents, including a detailed terms of reference, for one or more sub-contracts for support to micro-enterprise development and financing (see TOR #23).
- Participate (via e-mail and teleconferencing) in assessing bids for one or more sub-contracts to be awarded for micro-enterprise development and financing.

III. Timing, duration and duty stations

The duration of the MMS’s assignment will be 43 working days. The consultant’s time will be allocated between the project sites (7 days per site), Damascus (12 working days) and home-based support (10 working days). The assignment is expected to take place during Year 1 of the project.

IV. Qualifications

- Extensive experience with micro-credit and micro-enterprise development in developing countries;
- Advanced degree in a relevant field, e.g., sociology, socio-economics, resource economics, environmental economics, etc.;
- Familiarity with natural resource issues;
- Excellent English-language communication skills;
- Arabic-language skills an advantage
- Experience working with various stakeholder groups.

¹⁹ See Section II, Project brief.

Title	Other international consultants		
Terms of reference ID#	15	Budget line	Misc.
Type of contract & ID#	SSA	Activity Area reference(s)	See below

Provision has been made in the project budget for recruiting additional international experts to support project implementation. An estimated 6 work-months of support will be available through UNDP and GEF funding.

Brief descriptions of the planned consultancies are provided below. It will be the responsibility of the NPD, working in co-operation with the PIMA, to develop these TOR further. This should be done in consultation with the relevant NPMs and UNDP Syria.

- 15.1 Forest ecologist: (AA 1.3): Work with national consultant (see TOR # 15.3) to develop more biodiversity-friendly remediation efforts as alternatives to mono-species afforestation. Development of new propagation techniques.
- 15.2 PA financing specialist: (AA 1.3): Work with national consultant (see TOR # 15.4) to develop PA investment planning capabilities and revenue generation options by PAs.

1.1.4 Terms of reference for National Consultants

Title	Misc. National Consultants		
Terms of reference ID#	16	Budget line	Misc.
Type of contract & ID#	SSA	Activity Area reference(s)	See below

Provision has been made in the project budget for recruiting additional national experts to support project implementation. Brief descriptions of the planned consultancies are provided below. It will be the responsibility of PCU staff, working in co-operation with the PIMA, to develop and finalize these TORs. This should be done in consultation with the relevant NPMs and UNDP Syria.

- 16.1: Socio-economist – Baseline indicators (AA 2.2): Definition of baseline socio-economic indicators and monitoring programme for demonstration sites. Determine their baseline levels (with field work as appropriate) and devise a system for ongoing monitoring (by FD) at all three sites (latter to be subject of subsequent sub-contract) (3 months).
- 16.2: Forest ecologist – Baseline indicators (AA 2.2): Definition of baseline ecological indicators and monitoring programme for demonstration sites: define ecological indicators, determine their baseline levels (this is trickier) and devise a system for ongoing monitoring (by FD) at all 3 sites (4 months).
- 16.3 Follow up indicator surveys: (AA 2.2): Consultant(s) will support local FDs in conducting periodic surveys of changes in impact indicators. Frequency and methodology of monitoring to be defined through baseline indicator surveys (see 15.1 and 15.2 above).
- 16.4 Forest ecologist #2 – Biodiversity-friendly remediation: (AA 1.3): Work with corresponding international consultant (see TOR #14.1) in this area (6 months).
- 16.5 Environmental economist (AA 1.3): Work in co-operation with corresponding international consultant (see TOR #14.2, Protected Area financing specialist) in this area to develop PA investment planning capacities and revenue generation options by PAs (6 months).
- 16.6 Standardization of PA reporting (AA 1.3): Visits to and training of local officials across the country, and/or organizing workshops for this purpose
- 16.7 PA management planning specialists: (AA 2.3): Working with corresponding international consultant (see TOR 11.02) to develop management plans for project demonstration sites.
- 16.8 Traditional community knowledge gathering: (AA 3.1): Assess and record community knowledge of, and traditional practices towards, natural resources, including medicinal herbs.

1.1.5 Terms of Reference for Sub-contracts

Title	Institutional and human resource assessment		
Terms of reference ID#	17	Budget line	72100
Type of contract & ID#	Sub-contract #1	Activity Area reference(s)	1.1, 1.2

I. Background

The PDF-B has identified limited human and institutional capacities to manage a protected area system as among the key constraints to be addressed by the present project. Capacity constraints make themselves felt both at national level within the key participating ministries – MAAR and MLAE – as well as at local level, especially within local Departments of Forestry.

The sub-contractor will develop a detailed programme to strengthen human and institutional capacities to manage protected areas in Syria. This programme will be based on Government agreement on a thorough rationalization of human and institutional responsibilities in this area. In this way, the project will ensure that its capacity-building support will be directed to areas where it is truly needed.

II. Tasks / responsibilities

The sub-contractor will undertake the following specific tasks:

- i. Analyse required Governmental functions related to PA management and propose revised allocation of these tasks between central and local Governmental levels and among relevant Government departments, as appropriate.
- ii. Conduct a careful review of unit and job descriptions of all Headquarters and Field Departments of MLAE, MAAR and other Ministries with current or potential future involvement in PA management. This should include an analysis of lines of authority and reporting functions within the various ministries. Where non-existent, relevant unit and job descriptions should be developed, in co-operation with current staff.
- iii. Review existing human capacities for PA management within the above Ministries and Governmental units, compared with above-identified job and unit requirements.
- iv. Assess the potential contribution of non-Governmental organizations to PA management. This should include developing strategies for enhanced stakeholder participation and/or co-management of protected areas.
- v. Prepare a report (English and Arabic versions) proposing:
 - a. rationalized task description of relevant Headquarters and Field units to ensure minimal overlap and maximum, cost-effective coverage of required PA-management and co-ordination tasks;
 - b. a programme to raise the capacities of restructured staff and units to undertake agreed PA management responsibilities (at field level, this programme should be limited to provinces hosting project demonstration sites);²⁰

²⁰ The proposed programme should take account of the available budgetary envelope within the present GEF project, together with any potential sources of leveraged co-financing. It should represent an elaboration of activities described under Outcome 1 of the project brief.

- c. appropriate roles for non-governmental stakeholders, as well as a programme to raise their capacities to contribute to PA management objectives (at field level, this programme should be limited to provinces hosting project demonstration sites).²¹
- vi. Organize broad-based stakeholder workshops as necessary to reach agreement on above proposals for rationalized PA-management structure.
- vii. Secure high-level Governmental approval for revised institutional and human structures and systems developed in the above policy report. This should be codified formally, for example in a Memorandum of Understanding among relevant agencies or other formal policy agreement on institutional set-up.

III. Timing and location

The sub-contract is expected to last for a 12-month period, beginning as soon as possible upon completion of the inception phase. Work will be undertaken at Damascus and at field locations, including, but not necessarily limited to, the three project demonstration sites.

IV. Remuneration

The value of the sub-contract to be issued by for this assignment is US\$132,500. A competitive bidding process will be followed for issuing the sub-contract. It is expected that the successful bidder will need to use a combination of national and international expertise in order to complete the assignment.

V. Reporting

The sub-contractor will prepare quarterly progress reports regarding the assignment. A draft outline of these reports should be appended to the bid proposal for the assignment.

²¹ This component should likewise be costed as per the previous note.

Title	Institutional and human resource capacity building		
Terms of reference ID#	18	Budget line	72100
Type of contract & ID#	Sub-contract #2	Activity Area reference(s)	1.1, 1.2

I. Background

The PDF-B has identified limited human and institutional capacities to manage a protected area system as among the key constraints to be addressed by the present project. Capacity constraints make themselves felt both at national level within the key participating ministries – MAAR and MLAE – as well as at local level, especially within local Departments of Forestry.

The sub-contractor will implement a detailed programme to strengthen human and institutional capacities to manage protected areas in Syria. This programme will be based on Government agreement on a thorough rationalization of human and institutional responsibilities in this area (see TOR #17 above). In this way, the project will ensure that its capacity-building support will be directed to areas where it is truly needed. It will also include capacity-building support for non-governmental stakeholders.

II. Tasks / responsibilities

The sub-contractor will be responsible for implementation of capacity building measures defined in the final report of the institutional and human resource assessment (see TOR #17).

III. Timing and location

The sub-contract is expected to last for a 24-month period, beginning as soon as possible following completion of the institutional and human resource assessment. Training and capacity building will be undertaken at Damascus and at field locations, including, but not necessarily limited to, the three project demonstration sites.

IV. Remuneration

The value of the sub-contract to be issued by for this assignment is US\$260,000. A competitive bidding process will be followed for issuing the sub-contract. It is expected that the successful bidder will need to use a combination of national and international expertise in order to complete the assignment.

V. Reporting

The sub-contractor will prepare quarterly progress reports regarding the assignment. A draft outline of these reports should be appended to the bid proposal for the assignment.

Title	PA prioritisation and gaps analysis		
Terms of reference ID#	19	Budget line	72100
Type of contract & ID#	Sub-contract #3	Activity Area reference(s)	1.3, 1.4

I. Background

As is true in many countries, the process of identifying and prioritising protected areas (PAs) is far from systematic in Syria. Various governmental agencies have differing and in some ways overlapping responsibilities in this area and co-ordination is inconsistent. As a result, it is far from clear that the system which is gradually emerging from this ad-hoc process is one which will adequately meet Syria's national conservation objectives, as outlined by the National Biodiversity Strategy, etc. The present sub-contract will support efforts to address this problem.

II. Tasks / responsibilities

The sub-contractor will develop and implement a programme to introduce a rational process for identifying and prioritising the establishment of PAs. This will help to ensure that the PA system as a whole makes the greatest possible contribution to national, regional and global biodiversity conservation goals.

The sub-contractor will undertake the following specific tasks:

- o Assess the current PA system and the effectiveness of areas being conserved in theory in terms of completeness of coverage. The assessment should cover all major ecosystems, including forest, steppe/bardia and wetlands;
- o Integrate information on Syria's PAs into existing data sets on regional PA systems, in order to help identify regional gaps;
- o Identify a financially realistic priority programme for PA extension (both extension of existing PAs and establishment of new ones) to fill national- and regional-level gaps²²;
- o Identify existing PAs requiring priority management upgrades, based on gaps analysis and species coverage. This should be aimed at answering the question: "Where can Syria and the broader region get the most added benefit from additional conservation investments within Syria, beyond those being undertaken at the GEF demonstration sites?"
- o Disseminate a methodology for next steps, e.g., ecological surveys and social impact assessments (Note: Perhaps a portion of Government co-financing [or else leveraged co-financing], could be earmarked for follow-up?).

The above tasks will be undertaken in a fully consultative manner, involving all major stakeholders. A series of workshops (to be funded separately by the GEF budget) will be one mechanism for such consultations. The sub-contractor will be responsible for the content and conduct of these workshops. Overall, the sub-contractor will report to the National Project Director (NPD).

III. Timing and location

The sub-contract will run for a 12-month period. In case any uncertainty remains during the early stages of the project concerning the respective roles of the two main agencies – MAAR and MLAE – then it will be necessary to await the conclusion of Sub-contract #1, which will

²² The latter refers to sites in Syria that would contribute to filling regional-level gaps.

be critical to determining the overall PA-related roles of these and other Governmental bodies.

IV. Remuneration

The value of the sub-contract to be issued for this assignment is US\$120,000. A competitive bidding process should be followed for issuing the sub-contract. It is expected that the successful bidder will need to use a combination of national and international expertise in order to complete the assignment.

V. Reporting

The sub-contractor will prepare an intermediate and a final report. A draft outline of this report should be appended to the bid proposal for the assignment.

Title	National-level data management system		
Terms of reference ID#	20	Budget line	72100
Type of contract & ID#	Sub-contract #4	Activity Area reference(s)	1.4

I. Background

The project brief identified a need to ensure that data and information flows from MAAR-managed and other PAs flow into a centralized data management system capable of monitoring biodiversity change within both PAs and the broader landscape, particularly within corridors between PAs. This type of broad, national-level data compilation and assessment is among the key responsibilities of MLAЕ in this area. Relevant data includes both ecological information as well as information on threats and threat reduction.

II. Tasks / responsibilities

The sub-contractor will develop and implement a programme to improve data and information flows about protected areas and their role in biodiversity conservation. This will include the following specific tasks:

- *To be completed during inception phase.*

The consultant / sub-contractor will report to the Deputy National Project Director (DNPD).

III. Timing and location

The sub-contract will run for a 9-month period.

IV. Remuneration

The value of the sub-contract to be issued for this assignment is US\$111,000. A competitive bidding process should be followed for issuing the sub-contract. It is expected that the assignment can be completed using expertise available nationally.

V. Reporting

The sub-contractor will prepare an intermediate and a final report. A draft outline of this report should be appended to the bid proposal for the assignment.

Title	Public awareness campaign		
Terms of reference ID#	21	Budget line	20.05
Type of contract & ID#	Sub-contract #5	Activity Area reference(s)	1.4

I. Background

The project brief has identified a need to raise public awareness concerning the role of protected areas in biodiversity conservation in Syria. This should include preparation and wide dissemination of awareness materials including brochures, posters, a ‘user-friendly’ annual report, etc.

II. Tasks / responsibilities

The sub-contractor will develop and implement a programme to raise public awareness about protected areas and their role in biodiversity conservation. This will include the following specific tasks:

- *To be completed during inception phase.*²³

The consultant / sub-contractor will report to the Deputy National Project Director (DNPD).

III. Timing and location

The sub-contract will run for a 24-month period.

IV. Remuneration

The value of the sub-contract to be issued for this assignment is US\$178,000. A competitive bidding process will be followed for issuing the sub-contract. It is expected that the successful bidder will need to use a combination of national and international expertise in order to complete the assignment.

V. Reporting

The sub-contractor will prepare an intermediate and a final report. A draft outline of this report should be appended to the bid proposal for the assignment.

²³ The present terms of reference will be finalized based on a thorough review, to be conducted by the PCU, of the results and impact of public awareness investments undertaken through the World Bank MSP.

Title	Site-based ecological and socio-economic monitoring and data management		
Terms of reference ID#	22	Budget line	72100
Type of contract & ID#	Sub-contract #6	Activity Area reference(s)	2.2, 3.2

I. Background

While some useful socio-economic and ecological data has been collected during the PDF-B process, more will be needed to establish a more comprehensive baseline. This baseline will be important for developing management strategies, as well as for allowing comparison with data gathered during later stages of project implementation. This in turn will allow for an effective approach to monitoring the impacts of the project. Among other aspects, the programme will include the use of threat reduction indicators.

The above baseline socio-economic and ecological indicators will be developed and estimated by national consultants during the first months of the project (see TORs 16.1 and 16.2). Equipment will be provided separately to support the programme, as part of an effort to build Forest Department (FD) capacities in this area. It will be followed up with ongoing monitoring by the FD, supported through Government co-financing.

Based on experience gained through the initial baseline data gathering and follow-up monitoring process at the project demonstration sites, a long-term ecological monitoring programme will be devised for widespread replication. It will be important for this latter programme to be compatible with other data systems being developed and used nationwide.

II. Tasks / responsibilities

The sub-contractor will develop and implement a programme to strengthen ecological monitoring and data management capacities for protected areas in Syria. This will include the following specific tasks:

- o Visit project demonstration sites to participate in indicator surveys being conducted by local Forestry Departments and to derive lessons learned from experience at these sites;
- o Prepare and seek approval of guidelines for data collection and monitoring by PAs throughout Syria, based on above lessons learned;
- o Organise and run workshops to provide training in use of accepted monitoring guidelines by Headquarters- and provincial-level officials from across Syria;
- o Support provincial-level efforts to adapt guidelines to site-specific conditions;
- o Develop a system for managing monitoring data coming from project sites. This may be based on either a new or an existing data management system.

The consultant / sub-contractor will report to the **National Project Director (NPD)** and to the **Site Managers (SMs)** at each site.

III. Timing and location

The sub-contract will run for a 12-month period, beginning in year 4.

IV. Remuneration

The value of the sub-contract to be issued for this assignment is US\$131,047. A competitive bidding process should be followed for issuing the sub-contract. It is expected that the assignment can be completed using expertise available nationally.

Title	Implement new management plan activities		
Terms of reference ID#	23	Budget lines	72100
Type of contract & ID#	Sub-contracts #7-9	Activity Area reference(s)	2.4

I. Background

In addition to strengthened human resources and enhanced data and information flows, improved management at demonstration sites will require effective systems for integrated management planning. Site managers will need support in order to develop medium-term plans for their sites, encompassing biodiversity conservation and remediation goals, and practical strategies for achieving these.

Additional activities beyond those identified in the project brief, including infrastructure investments, will be formulated and implemented under the auspices of these management plans. The management plans will also stipulate areas for sustainable use. The management plans will develop appropriate mechanisms for equitable sharing of benefits with local communities in the event that tourism revenues increase. Finally, the plans will stipulate procedures regarding their own periodic updating.

Management plan activities will be designed with the close co-operation and participation of local communities surrounding the project sites. Wherever possible, these communities will also participate in implementation of the management plans, thereby benefiting from enhanced employment opportunities during the period of project implementation.

II. Tasks / responsibilities

The sub-contractor(s) will provide support to implementation of the management plans at project sites. Once the management plans are available, decisions can be made concerning what elements can be done by project and protected area staff and which should be sub-contracted. At this time, detailed bidding documents can be prepared.

The consultant / sub-contractor will report to the National Project Director (NPD).

III. Timing and location

The sub-contract(s) will run for a 48-month period.

IV. Remuneration

The total value of the sub-contract(s) to be issued for this assignment is US\$375,900. A competitive bidding process should be followed for issuing the sub-contract(s). It is expected that the successful bidder(s) will need to use a combination of national and international expertise in order to complete the assignment.

V. Reporting

The sub-contractor(s) will prepare periodic reports on implementation and a final report.

Title	In-depth socio-economic assessments of demonstration sites		
Terms of reference ID#	24	Budget line	72100
Type of contract & ID#	Sub-contract #10	Activity Area reference(s)	3.1

I. Background

The recent establishment of a number of protected areas (PAs) in Syria has had the effect of restricting access by local populations and others such as transhumants to resources, including land, water, timber, wildlife and wild plants (both for livestock grazing and collection), which had previously been utilized by these communities. Indeed, some communities have seen their villages become ‘islands’ within newly established PAs. This situation has created livelihood issues as well as no little amount of conflict, particularly between local villagers and forestry department officials.

II. Tasks / responsibilities

The sub-contractor will develop and implement a programme to assess local communities living within and immediately surrounding project demonstration sites. This will include the following specific tasks:

- o Undertake a comprehensive, participatory socio-economic assessment of each site, building upon the preliminary assessments undertaken during the PDF-B phase.
- o Assess the extent and nature of local community dependence on site resources, both directly (fuel, water, food, medicinal or income-generating resources) and indirectly (existence values, environmental values including watershed and soil stability, etc.)
- o Identify, quantify and prioritize various anthropogenic threats to the sites, e.g., grazing, agriculture and agrochemical use, hunting, wood-chopping, charcoal-making, etc.
- o Assess the extent to which these anthropogenic threats affect biodiversity in and sustainable use of the sites and the degree to which these threats need to be reduced or eliminated to achieve sustainability.
- o Record and catalogue local community knowledge of site resources, including medicinal plants and their properties.

The consultant / sub-contractor will report to the National Project Director (NPD).

III. Timing and location

The sub-contract will run for a 9-month period.

IV. Remuneration

The value of the sub-contract to be issued for this assignment is US\$102,000. A competitive bidding process should be followed for issuing the sub-contract. It is expected that the successful bidder will need to use a combination of national and international expertise in order to complete the assignment.

V. Reporting

The sub-contractor will prepare an intermediate and a final report. A draft outline of this report should be appended to the bid proposal for the assignment.

Title	Micro-credit and micro-enterprise development		
Terms of reference ID#	25	Budget line	72100
Type of contract & ID#	Sub-contract #11	Activity Area reference(s)	3.3

I. Background

A participatory consultation process undertaken during the PDF-B (see **Annex I**), which identified a number of possible sustainable and/or alternative livelihoods both within and outside of the traditional livestock/agricultural sector – e.g., techniques for sustainable use of PA resources, handicrafts production, etc. During the present full phase of the project, a series of briefings and discussions will be held with local communities to explain how their activities affect the sustainability of the sites, and the need to find alternative sustainable livelihood activities to substitute for existing unsustainable activities. Based on these discussions, potential alternative livelihood activities will be further identified / fine-tuned. This process of identification should closely involve local communities, and identified alternatives should constitute acceptable substitutes for existing income and resource sources. Potential alternatives should be researched and pilot-tested to identify those sustainable livelihood activities that are most suitable for local socio-economic and ecological conditions. Once suitable alternative livelihood activities have been identified and accepted by local communities, the AA will provide technical and financial support for the implementation of these alternatives in all affected communities.

II. Tasks / responsibilities

*Note - Tasks and responsibilities under the present sub-contract(s) will be specified in detail by the **Micro-credit and micro-enterprise specialist (MMS)**. This includes the decision whether to do the work as a single sub-contract or more than one (e.g., one per site).*

III. Timing and location

The sub-contract(s) will run for a 48-month period.

IV. Remuneration

The total value of the sub-contract(s) to be issued for this assignment is US\$396,000. A competitive bidding process should be followed for issuing the sub-contract. It is expected that the successful bidder will need to use a combination of national and international expertise in order to complete the assignment.

V. Reporting

The sub-contractor will prepare an intermediate and a final report. A draft outline of this report should be appended to the bid proposal for the assignment.

Annex 1.3: Monitoring and Evaluation (M&E) Plan

Project monitoring and evaluation (M&E) represent integral aspects of the project's design. Monitoring and evaluation will be interactive and mutually supportive activities. Monitoring – a continuous process of collecting and analysing information needed to measure the progress of the project toward expected results – will be frequent and thorough. It will provide project managers and stakeholders with regular feedback to help them determine whether the project is progressing as planned. Monitoring will be supplemented by formal evaluations – periodic assessments of project performance and impact. Evaluations will also document what lessons are being learned from experience.

The project's M&E programme will be guided by a set of **indicators**, which represent a summary description of the expected results and impacts referred to above. The indicators, first proposed in the project brief's **Logical Framework Matrix (LFM)**, are adaptable in the sense that they may be subject to revision during the course of project implementation, as project and site management goals are adapted to changing circumstances.²⁴ Indeed, it is expected that the currently proposed set of indicators (see below) will be revised during the **Project Inception Phase (PIP)**.

Aside from standard project functions such as ensuring correct auditing, etc, the primary objective of the project's M&E component is to help guide the project towards successful achievement of these indicators.

Two broad sets of indicators have been developed, towards which both monitoring and evaluation processes will contribute. The first is designed to keep track of the **process** of project delivery and implementation. This includes a number of important aspects, such as:

- whether the GEF budget is being spent as planned, both in terms of activities supported (staff and consultants recruited, equipment delivered, etc.) and timing of delivery;
- whether stakeholders are participating as planned;
- whether project activities are being implemented, and outcomes achieved, as planned (as evidenced, *inter alia*, by the completion of project deliverables as per the project workplan);
- whether project co-financing has been mobilized and delivered as planned.

Monitoring of the above **process indicators** can provide project managers with timely information needed for adaptive project management. It may, for example, alert them to capacity difficulties within the project team, project partners or implementing agencies, and help suggest alternative strategies to improve the efficiency of implementation. **Process monitoring** will be aimed at ensuring that the inputs called for within the project brief, including co-financed inputs, are promptly and appropriately delivered and, as a result, that the activities described are indeed taking place roughly as planned. Where changes to inputs and activities become necessary – often due to a perceived need to adapt the project strategy to changed circumstances – these are to be closely monitored, as well as clearly explained and justified by the project team. **Project evaluations** will also look closely at process, particularly in cases where implementation bottlenecks have clearly hindered project delivery and performance.

²⁴ Reasons for revising project indicators may include: demonstrated inability (physical or practical) to collect reliable baseline data on an indicator (which implies an inability to measure change from such a baseline with confidence); interim monitoring indicates that target changes are unrealistically high; interim monitoring suggests that target changes have been easily and early on achieved and that more rigorous goals need to be set, and/or; more appropriate indicators have been identified.

In many cases, process indicators will not require significant effort to define a **baseline**, i.e., a point of departure from which the project can measure change. Thus, for example, in the case of an indicator which states “Management plan has been adopted,” the baseline is simply “No management plan.” In other cases, e.g., “Transhumants report fewer conflicts with farmers,” some field work will be required in order to estimate a baseline.

Table 1.3.1 below provides a chronological list of the project’s process indicators, originally presented in the LFM, together with their means of verification and an indication of the possible need for baseline data gathering.

Table 1.3.1: Process indicators to be monitored under M&E programme

By end of year	Indicator	Means of verification
2	<ul style="list-style-type: none"> A detailed and agreed set of streamlined national institutional arrangements describing the functions of all units and agencies involved in PA management and clarifying their respective roles and mechanisms of co-operation 	National policy statement
4	<ul style="list-style-type: none"> Relevant HQ units possess a critical mass of trained staff able to effectively manage the overall PA system, including oversight of individual PAs 	Project reporting
7	<ul style="list-style-type: none"> MAAR has developed and is implementing a comprehensive set of HQ-based activities aimed at managing and extending PAs within forest areas and other dryland ecosystems (rangelands) 	Project reporting: mid-term and final evaluations
7	<ul style="list-style-type: none"> MLAE is implementing a system for inter-sectoral co-ordination through which it is able to closely monitor and provide direction to other ministries to ensure that the national system of PAs plays a visible role in achieving national biodiversity conservation and sustainable development objectives 	Project reporting: mid-term and final evaluations
4	<ul style="list-style-type: none"> Local cadres and managers at project sites are trained in ecosystem-based management and have been exposed to examples of international best practices 	Project reporting
2	<ul style="list-style-type: none"> Baseline monitoring reports on biodiversity dynamics and natural resource management are available for each project site 	Project reporting
2	<ul style="list-style-type: none"> Integrated management plans are agreed at each site. Plans may be updated annually on a rolling basis thereafter 	Site management plans
5	<ul style="list-style-type: none"> Management actions are being implemented in accordance with management plans 	Site management plans; monitoring reports prepared by SMs
4	<ul style="list-style-type: none"> Examples of participatory management mechanisms and stakeholder feedback systems are incorporated into management plans and operations. 	Management plans and operational policies; feedback from local stakeholders, management committees and community consultations
7	<ul style="list-style-type: none"> 75% of rural and Bedouin communities have been involved in sustainable use of natural resources in the 3 sites 	Reports measuring local stakeholder participation in the project

While successful implementation of the project, as measured by its process indicators, is necessary, it not sufficient to ensure the project’s overall success. What is ultimately more important, and must therefore also be carefully monitored and evaluated, is the **project’s impact**.

In GEF terms, the process of measuring project impact is known as **results measurement** and it is meant to be achieved through use of a set of **impact indicators**. Results measurement is aimed at estimating the short-, medium- and long-term results or impacts of the project intervention. While concerned with institutional and other capacity-related impacts, the GEF is particularly concerned with identifying and measuring actual physical or biological impacts on the environment and on biodiversity, as well as socio-economic impacts which may contribute to reduced pressure on biological resources. Compared with process indicators, impact indicators require greater attention to **defining a baseline**, so that project impacts may be measured based on the 'distance covered' from their ecological and socio-economic baseline.

Table 1.3.2 below presents the current set of impact indicators meant to be followed up by the project's M&E programme.

Table 1.3.2: Impact indicators to be monitored under M&E programme

By end of year	Indicator	Means of verification
See under indicator	<ul style="list-style-type: none"> Overall human footprint within demonstration PAs, as defined by an impact reduction index to be developed under biodiversity monitoring programme, is measured annually and reduced 25% by Year 3 and 50% by end of project. 	<ul style="list-style-type: none"> Biodiversity monitoring reports (see AA 1.3 and 1.4)
7	<ul style="list-style-type: none"> Species-specific surveys indicate at least 25% recovery in populations of target globally significant species 	<ul style="list-style-type: none"> Biodiversity monitoring reports (see AA 1.3 and 1.4)
7	<ul style="list-style-type: none"> 40% of local communities involved in sustainable use of the natural resources in the 3 sites 	<ul style="list-style-type: none"> Monitoring reports measuring people participation in the project
7	<ul style="list-style-type: none"> 50% increase in ecosystem integrity and 50% decrease in level of threats 	<ul style="list-style-type: none"> Biodiversity and natural resource monitoring reports
7	<ul style="list-style-type: none"> At national level, 40% increase in land area under PA status 	<ul style="list-style-type: none"> PA annual reports

Table 1.3.3 below describes the various tools for M&E and their relationship to process and/or impact indicators. It also highlights the responsibilities of various project partners and the budgets allocated for the various activities.

Table 1.3.3: Overview of M & E tools

M & E tool	Purposes	Guidelines for use and breakdown of responsibilities	Relationship to process and/or impact indicators	Budget
Definition of project baseline	To have available accurate baseline data to enable changes brought about by the project to be demonstrated and measured.	Process and impact indicators will be revised during PIP and TOR (see Annex 1.1.4, TORs #16.1 and 16.2) will be finalized for data gathering to determine baseline values. Baseline study should be completed within six months following end of inception phase.	Study is designed to sharpen definition of these indicators as well as collect baseline values for them.	\$18,000
Ongoing monitoring of process and impact indicators	To provide project managers with an updated quantitative overview of project progress	PCU staff will be responsible for ongoing monitoring of process indicators, as these are closely related to activities being undertaken or supervised by them. A sub-contractor (see Annex 1.1.4, TOR #16.3) will have responsibility for monitoring and reporting to the PCU on ecological and socio-economic impact indicators.	This activity will generate data concerning degree of achievement of the selected indicators	\$24,000
Annual and periodic budget revisions	To ensure that project funds are managed effectively and are spent for the purposes envisaged in the project brief and project document and to provide project partners with updated information on project delivery and expenditures	Project budget revisions will be prepared by UNDP Syria, based on substantive inputs from the project team. They will be approved by the Resident Representative or Officer-in-Charge. An annual revision is mandatory and must be completed by 10 June. This is to reflect the final expenditures for the preceding year and to enable the preparation of a realistic plan for the provision of inputs for the current year. Other budget revisions may be undertaken as necessary during the course of the project.	Shifting of funds may lead to a need for minor revisions to process indicators as new or revised activities or timing are agreed upon.	N.A.
Substantive budget revisions	To allow for substantive changes in the project's objectives, immediate objectives, duration, scope of intervention, or project sites	Substantive revisions are defined and should be undertaken as set out in the UNDP Programming Manual. Such revisions should be endorsed by the Project Steering Committee (PSC) . In addition, if the substantive project revision includes changes to the agreed use of GEF funds, it must be cleared by the Executive Coordinator UNDP/GEF before being signed.	Substantive revisions should be justified, <i>inter alia</i> , based on their perceived positive benefits on process and impact indicators. Conversely, substantive budgetary changes may require changes in either process or impact indicators.	N.A.
Quarterly operational report	To provide UNDP Syria and UNDP-GEF with quarterly information on project	Each quarter, the NPD is required to prepare a 100-word summary of the project's substantive and technical progress towards achieving its objectives. The summaries are reviewed and cleared by UNDP-Syria	The quarterly reports should explain successes and failures in implementing the project workplan, with reference to deliverables and other process	N.A.

M & E tool	Purposes	Guidelines for use and breakdown of responsibilities	Relationship to process and/or impact indicators	Budget
	implementation	before being sent to the UNDP/GEF Regional Coordinator.	indicators contained therein.	
Tripartite review (TPR)	To provide the main project partners – Government, UNDP and GEF– with an annual opportunity to assess project implementation and to agree on necessary measures for improvement.	<p>A TPR is a policy-level meeting of the parties directly involved in the project. A tripartite review must be held once a year. In exceptional circumstances, there may be more than one TPR during a year. The following parties participate in the TPR:</p> <ul style="list-style-type: none"> • The Government: the Designated Institution and other concerned agencies; • UNDP; • The Project Team, and; • Other main stakeholders, including other United Nations agencies and other donors, as deemed appropriate. 	The TPR needs to take stock of progress towards achieving process indicators. It should also review whether project managers are correctly utilizing impact indicators. Beginning in Year 3, the TPR should begin looking at findings linked to impact indicators, i.e., whether the project has begun having measurable impacts.	
Combined Annual Project Report (APR) and Project Implementation Review (PIR)	To provide a kind of project ‘Annual Report’ of progress and/or difficulties in implementation	The APR/PIR is used as an input to the Tripartite Review (TPR) and must be ready two weeks prior to the TPR meeting. The PCU is responsible for preparing the APR/PIR. It may be completed and submitted via UNDP-Syria to the UNDP/GEF Regional Coordinator at any time, so long as it covers the July-June GEF reporting period. Normally it is submitted to the Regional Coordinator at the same time that it is prepared for the TPR, with revisions made taking into consideration TPR outcomes. The NPD will present the report at the TPR meeting. It should be noted that the UNDP/GEF Regional Coordinator is responsible for submitting the APR/PIR for GEF purposes and therefore must be satisfied with the content.		
Site visits	To permit project stakeholders, particularly UNDP Syria, UNDP-GEF and Government, to observe first-hand the activities and progress taking place at the	Site monitoring visits by UNDP Syria should take place on an approximately annual basis and otherwise as needed. It would be useful for annual visits to take place in the immediate period prior to the TPR, so that the UNDP Officer could present his/her observations to that meeting. Site visits should include consultations with local stakeholders, including local government and village leaders. UNDP-GEF should undertake two site		\$20,000

M & E tool	Purposes	Guidelines for use and breakdown of responsibilities	Relationship to process and/or impact indicators	Budget
	project site.	visits during the life of the project.		
Independent Mid-term Evaluation	To undertake a comprehensive evaluation of project implementation to date and present recommendations on how to improve the project during its second half.	The evaluation will be organized by UNDP-GEF .	The mid-term evaluation represents an important opportunity to review success in achieving process indicators. It may also be possible at this time to observe preliminary indications of project impacts.	\$40,000
Final Project Evaluation	See Annex 1.6, Guidelines for Implementing Agencies to conduct terminal evaluations		The final project evaluation may represent the final opportunity to gauge project impacts as well as to identify and assess lessons learned from the implementation process	\$50,000

Annex 1.4 Total Budget and Workplan

Total Budget and Workplan

Output / Activity Area with corresponding indicators	Timeframe							Responsible party	Planned budget		
	Y1	Y2	Y3	Y4	Y5	Y6	Y7		Source	Description	Amount
1.1 Institutional capacity building for PA management <i>(By end of Year 2, a detailed and agreed set of streamlined national institutional arrangements describing the functions of all units and agencies involved in PA management and clarifying their respective roles and mechanisms of co-operation)</i>	x	x						MLAE	GEF	72100: Contractual services - Companies (TOR #17: Institutional and human resources assessment)	\$46,000
		x	x	x				MLAE	GEF	72100: Contractual services - Companies (TOR#18: Institutional and human resource capacity building)	\$85,000
	Sub-total										\$131,000
1.2 Human resource development <i>(By end of Year 4, relevant HQ units possess a critical mass of trained staff able to effectively manage the overall PA system, including oversight of individual PAs)</i>	x	x						MLAE	GEF	72100: Contractual services - Companies (TOR#17: Institutional and human resource assessment)	\$86,500
		x	x	x				MLAE	GEF	72100: Contractual services - Companies (TOR #18: Institutional and human resource capacity building)	\$175,000
	Sub-total										\$261,500

1.3 Support for carrying out PA-related co-ordination responsibilities - MAAR <i>(By end of project, MAAR has developed and is implementing a comprehensive set of HQ-based activities aimed at managing and extending PAs within forest areas and other dry-land ecosystems / rangelands)</i>	X	x									MAAR	GEF	71200 - International consultants (TOR#15.1: Forest ecologist)	\$39,600	
		x	x									MAAR	GEF	71200 - International consultants (TOR#15.2: Protected area financing specialist)	\$29,700
	X											MAAR	GEF	71300 - Local consultants (TOR #16.4: Forest ecologist #2)	\$18,000
		x	x									MAAR	GEF	71300 - Local consultants (TOR #16.5: Environmental economist)	\$18,000
	X	x	x	x	x	x	x	x	x			MAAR	GEF	71300 - Local consultants (Workshops)	\$10,000
			x									MAAR	GEF	71300 - Local consultants (TOR # 16.6: Standardization of PA reporting)	\$9,000
		x	x									MAAR	GEF	72100 - Contractual services - Companies (TOR #19: Protected area prioritization and gaps analysis)	\$60,000
	X	x	x	x	x	x	x	x	x			MAAR	GEF	71600 - Travel (Mission costs)	\$72,000
		x		x		x						MAAR	GEF	74100 - Professional services (Reporting costs)	\$7,700
		X	x	x	x	x	x	x	x			MAAR	GEF	74100 - Professional services (Workshop expenses)	\$15,000
Sub-total														\$279,000	
1.4 Support for carrying out PA-related co-ordination responsibilities - MLAE <i>(By end of project, MLAE is implementing a system for inter-sectoral co-ordination through which it is able to closely monitor and provide direction to other ministries to ensure that the national system of PAs plays a visible role in achieving national biodiversity conservation and sustainable development objectives)</i>		x	x								MLAE	GEF	72100 - Contractual services - Companies (TOR #19: Protected area prioritization and gaps analysis)	\$60,000	
		x	x	x	x						MLAE	GEF	72100 - Contractual services - Companies (TOR #21: Public awareness campaign)	\$198,500	
		x	x									MLAE	GEF	72100 - Contractual services - Companies (TOR #22: Data management system)	\$91,000

	x	x	x	x	x							MLAE	GEF	71600 - Travel (Mission costs)	\$22,000
	x	x	x	x								MLAE	GEF	71300 - Local consultants (Workshop organization)	\$15,000
	x	x	x	x								MLAE	GEF	74100 - Professional services (Workshop expenses)	\$20,000
	Sub-total														\$406,500
1.5 Project management	x	x	x	x	x	x	x	x	x			MLAE	GEF	71200 - International consultants	\$92,221
	x	x	x	x	x	x	x	x	x			MLAE	GEF	71300 - Local consultants (National professionals and consultants)	\$253,000
	x	x	x	x	x	x	x	x	x			MLAE	GEF	71400 - Contractual services - Individuals (Administrative support)	\$46,929
	x	x	x	x	x	x	x	x	x			MLAE	GEF	71600 - Travel (Mission costs / local travel)	\$35,000
	x	x	x	x	x	x	x	x	x			MLAE	GEF	72200 - Equipment	\$30,000
	x	x	x	x	x	x	x	x	x			MLAE	GEF	74000 - Miscellaneous	\$16,000
	x	x	x	x	x	x	x	x	x			MLAE	GEF	74100 - Professional services (Reporting)	\$16,500
	Sub-total														\$489,650
TOTAL OUTCOME 1														\$1,567,650	

2.1 Training of local cadres and managers in ecosystem planning and management <i>(By end of Year 4, local cadres and managers at project sites are trained in ecosystem-based management and have been exposed to examples</i>	x	x										MAAR	GEF	71600 - Travel (Study tours, fellowships & workshops for MAAR field staff)	\$105,000
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<i>based management and have been exposed to examples of international best practices)</i>	x	x							MAAR	GEF	71600- Travel (Study tours, fellowships & workshops for MLAE field staff)	\$67,000
		x	x						MAAR	GEF	71300 - Local consultants (Workshop organization for MAAR & MLAE)	\$45,000
	x	x	x						MAAR	GEF	71600 - Travel (Mission costs/ local travel)	\$17,000
	x	x	x						MAAR	GEF	74000 - Miscellaneous (Related expenses)	\$35,000
	Sub-total											\$269,000
2.2 Implementation of biodiversity monitoring programmes <i>(By end of Year 2, baseline monitoring reports on biodiversity dynamics and natural resource management are available for each project site)</i>	x								MLAE	GEF	71300 - Local consultants (TOR # 15.1: Socio-economist, baseline indicators)	\$6,000
	x								MLAE	GEF	71300 - Local consultants (TOR # 15.2: Forest ecologist - baseline indicators)	\$12,000
	x	x	x						MLAE	GEF	71300 - Local consultants (TOR #15.3: Follow -up indicator surveys)	\$24,000
									MLAE	GEF	71600 - Travel (Mission costs/ local travel)	\$32,000
			x						MLAE	GEF	72100 - Contractual services - Companies (TOR #20: Ecological monitoring and data management)	\$74,000
	x	x							MLAE	GEF	72200 - Equipment (for exological monitoring and data management)	\$38,000
Sub-total											\$186,000	
2.3 Development of site management plans <i>(By end of Year 3, integrated management plans are agreed at each site. Plans may be updated annually on a rolling basis thereafter)</i>		x	x						MAAR	GEF	71200 - International consultants (TOR#13: Management planning expert)	\$89,100
		x							MAAR	GEF	71300 - Local consultants (TOR # 16.7: Management planning experts)	\$87,000
									MAAR		71600 - Travel (Mission costs/ local travel)	\$30,000

3.1 Assessment of local community relationships with demonstration sites and site resources	x						MAAR	GEF	71300 - Local consultants (TOR # 17.14: Traditional community knowledge gathering)	\$27,000
							MAAR		71600 - Travel (Mission costs/ local travel)	\$8,000
	x	x					MAAR	GEF	72100 - Contractual services- Companies (TOR #25: In-depth socio-economic assessments, sites 1-3)	\$34,000
	x	x					MAAR	UNDP	72100 - Contractual services- Companies (TOR #25: In-depth socio-economic assessments, sites 1-3)	\$68,000
										Sub-total
3.2 Site management plans and operational actions address threats arising from local community activities in and around site areas	x						MAAR	UNDP (50%), GEF (50%)	71300 - Local consultants: (TOR #16.1: Socio-economist - baseline indicators)	\$12,000
	x	x					MAAR	UNDP	72100 - Contractual services- Companies (TOR #23: GIS / data management)	\$57,047
										Sub-total
3.3 Alternative livelihood activities and opportunities are made available to local communities where required	x						MAAR	UNDP	71200 - International consultants (TOR#14: Micro-credit and microenterprise specialist)	\$25,000

	x	x	x	x	x	x	x	x	x	MAAR	UNDP	71300 - Local consultants (TOR #11: Socio-economic specialist)	\$94,080
										MAAR		71600- Mission costs/ local travel	\$35,000
										MAAR	UNDP	72100 - Contractual services - Companies (TOR #26: Micro-credit and micro-enterprise development)	\$132,000
										MAAR	UNDP	72100 - Contractual services - Companies (TOR #26: Micro-credit and micro-enterprise development)	\$132,000
										MAAR	UNDP	72100 - Contractual services - Companies (TOR #26: Micro-credit and micro-enterprise development)	\$132,000
												Sub-total	\$550,080
3.4 Project management										MLAE		71200 - International consultant	\$61,360
										MLAE		71300 - Local consultants (National professionals and consultants)	\$150,000
										MLAE		71400 - Contractual services - Individuals (Administrative support)	\$40,000
										MLAE		71600 - Travel (Mission costs / local travel)	\$27,000
										MLAE	UNDP	72200- Equipment	\$32,316
										MLAE		74000 - Miscellaneous	\$20,710
										MLAE		74100 - Professional services (Reporting)	\$12,487
												Sub-total	\$343,873
												TOTAL OUTCOME 3	\$1,100,000

OUTCOMES 1-3 TOTAL \$4,291,850

1.3 Support for carrying out PA -related co-ordination responsibilities - MAAR <i>(By end of project, MAAR has developed and is implementing a comprehensive set of HQ-based activities aimed at managing and extending PAs within forest areas and other dry-land ecosystems / rangelands)</i>	X	x						MAAR	GEF	71200 - International consultants (TOR#15.1: Forest ecologist)	\$39,600
		x	x					MAAR	GEF	71200 - International consultants (TOR#15.2: Protected area financing specialist)	\$29,700

Annex 1.5 Budget for Government in-kind contribution

Government input-output budget of in kind co-financing for GEF project

Outcome 1 - Policies and institutional systems

1.1 Institutional capacity building for PA management	139,000
1.2 Human resource development	135,000
1.3 Support for carrying out PA-related co-ordination responsibilities - MAAR	149,000
1.4 Support for carrying out PA-related co-ordination responsibilities - MSEA	<u>60,000</u>
Outcome sub-total	483,000

Outcome 2 - Techniques demonstrated for PA mgmt. & conservation

2.1 Training of local cadres and managers	95,000
2.2 Implement biodiversity monitoring	90,000
2.3 Develop site management plans	109,000
2.4 Implement site management plans	<u>1,285,000</u>
Outcome sub-total	1,579,000

Outcome 3 - Sustainable use in & around protected areas

3.1 Assessment of local community relationships with sites and resources	100,000
3.2 Socio-economic info. incorporated into management systems & strategies	50,000
3.3 Alternative livelihoods identified and made available	<u>195,000</u>
Outcome sub-total	345,000

Project total 2,407,000



Reporting Progress at Protected Area Sites

A simple site-level tracking tool developed for the
World Bank and WWF



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Cover photograph of Bwindi Impenetrable Forest Reserve, Uganda by Marc Hockings

Many thanks to those people who commented on earlier drafts, including Rod Atkins, David Cassells, Peter Cochrane, Finn Danielsen, Jamison Ervin, Jack Hurd, Glenys

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Sue Stolton, Marc Hockings, Nigel Dudley, Kathy MacKinnon and Tony Whitten

5 MARCH 2003

BACKGROUND

There is a growing concern amongst protected area professionals that many protected areas around the world are not achieving the objectives for which they were established. One response to this concern has been an emphasis on the need to increase the effectiveness of protected area management, and to help this process a number of assessment tools have been developed to assess management practices. It is clear that the existence of a wide range of situations and needs require different methods of assessment. The World Commission on Protected Areas (WCPA) has therefore developed a 'framework' for assessment²⁵. The WCPA framework aims both to provide some overall guidance in the development of assessment systems and to encourage standards for assessment and reporting.

The WCPA Framework is based on the idea that good protected area management follows a process that has six distinct stages, or elements:

- it begins with understanding the **context** of existing values and threats,
- progresses through **planning**, and
- allocation of resources (**inputs**), and
- as a result of management actions (**processes**),
- eventually produces products and services (**outputs**),
- that result in impacts or **outcomes**.

The World Bank/WWF Alliance for Forest Conservation and Sustainable Use ('the Alliance') was formed in April 1998, in response to the continued depletion of the world's forest biodiversity and of forest-based goods and services essential for sustainable development. As part of its programme of work the Alliance has set a target relating to management effectiveness of protected areas: *50 million hectares of existing but highly threatened forest protected areas to be secured under effective management by the year 2005*²⁶. To evaluate progress towards this target the Alliance has developed a simple site-level tracking tool to facilitate reporting on management effectiveness of protected areas within WWF and World Bank projects. The tracking tool has been built around the application of the WCPA Framework and Appendix II of the Framework document has provided its basic structure.

The World Bank/WWF Management Effectiveness Tracking Tool forms part of a series of management effectiveness assessment tools, which range from the *WWF Rapid Assessment and Prioritisation Methodology* used to identify key protected areas at threat within a protected area system to detailed monitoring systems such as those being developed by the *Enhancing Our Heritage* project for UNESCO natural World

²⁵ Hockings, Marc with Sue Stolton and Nigel Dudley (2000); *Assessing Effectiveness – A Framework for Assessing Management Effectiveness of Protected Areas*, University of Cardiff and IUCN, Switzerland

²⁶ Dudley, Nigel and Sue Stolton (1999); *Threats to Forest Protected Areas: Summary of a survey of 10 countries*; project carried out for the WWF/World Bank Alliance in association with the IUCN World Commission on Protected Areas, IUCN, Switzerland

Heritage sites. The Alliance has also supported the development of both the WCPA framework and the development of the WWF Rapid Assessment and Prioritisation Methodology.

The WCPA Framework

To maximise the potential of protected areas, and to improve management processes, we need to understand the strengths and weaknesses of their management and the threats that they face. In the last few years, various methodologies for assessing management effectiveness of protected areas have been developed and tested around the world. The World Commission on Protected Areas provides an overarching framework for assessing management effectiveness of both protected areas and protected area systems, to give guidance to managers and others and to help harmonise assessment around the world.

Table 1 contains a very brief summary of the elements of the WCPA Framework and the criteria that can be assessed²⁷. The World Bank/WWF Management Effectiveness Tracking Tool has been designed to fulfil the elements of evaluation included in the Framework.

5.1.1.1.1.1 Table 1: Summary of the WCPA Framework

Elements of evaluation	Explanation	Criteria that are assessed	Focus of evaluation
Context	<i>Where are we now?</i> Assessment of importance, threats and policy environment	<ul style="list-style-type: none"> - Significance - Threats - Vulnerability - National context - Partners 	Status
Planning	<i>Where do we want to be?</i> Assessment of protected area design and planning	<ul style="list-style-type: none"> - Protected area legislation and policy - Protected area system design - Reserve design - Management planning 	Appropriateness
Inputs	<i>What do we need?</i> Assessment of resources needed to carry out management	<ul style="list-style-type: none"> - Resourcing of agency - Resourcing of site 	Resources
Processes	<i>How do we go about it?</i> Assessment of the way in which management is	<ul style="list-style-type: none"> - Suitability of management processes 	Efficiency and appropriateness

²⁷ For a copy of the WCPA Framework or a more detailed summary please visit the WCPA web-site at: www.iucn.org/themes/wcpa or contact WCPA at wcpa@hq.iucn.org

	conducted		
Outputs	<i>What were the results?</i> Assessment of the implementation of management programmes and actions; delivery of products and services	- Results of management actions - Services and products	Effectiveness
Outcomes	<i>What did we achieve?</i> Assessment of the outcomes and the extent to which they achieved objectives	- Impacts: effects of management in relation to objectives	Effectiveness and appropriateness

Questions in the following tracking tool have been ordered to make completion as easy as possible; the element(s) that each refers to are indicated in the left hand column.

Purpose of the World Bank/WWF Management Effectiveness Tracking Tool

The World Bank/WWF Management Effectiveness Tracking Tool has been developed to help track and monitor progress in the achievement of the World Bank/WWF Alliance worldwide protected area management effectiveness target. It is also hoped that the tracking tool will be used more generally where it can help monitor progress towards improving management effectiveness; for example it is being used by the Global Environment Facility.

The Alliance has identified that the tracking tool needs to be:

- Capable of providing a harmonised reporting system for protected area assessment within both the World Bank and WWF;
- Suitable for replication;
- Able to supply consistent data to allow tracking of progress over time;
- Relatively quick and easy to complete by protected area staff, so as not to be reliant on high levels of funding or other resources;
- Capable of providing a “score” if required;
- Based around a system that provides four alternative text answers to each question, strengthening the scoring system;
- Easily understood by non-specialists; and
- Nested within existing reporting systems to avoid duplication of effort.

6 LIMITATIONS

The World Bank/WWF Management Effectiveness Tracking Tool is aimed to help *reporting progress* on management effectiveness and should not replace more thorough methods of assessment for the purposes of adaptive management. The tracking tool has been developed to provide a quick overview of progress in improving the effectiveness of management in individual protected areas, to be filled in by the protected area manager or other relevant site staff. As such it is clear that there are strict limitations on what it can achieve: it should not for example be regarded as an independent assessment, or as the sole basis for adaptive management.

Because of the great differences between expectations, resources and needs around the world, the tracking tool also has strict limitations in terms of allowing comparison between sites: the scoring system, if applied at all, will be most useful for tracking progress over time in one site or a closely related group of sites.

Lastly, the tracking tool is too limited to allow a detailed evaluation of *outcomes* and is really aimed at providing a quick overview of the management steps identified in the WCPA Framework up to and including *outputs*. Although we include some questions relating to outcomes, the limitations of these should be noted. Clearly, however good management is, if biodiversity continues to decline, the protected area objectives are not being met. Therefore the question on condition assessment has disproportionate importance in the overall tracking tool.

Guidance notes for using the Tracking Tool

The World Bank/WWF Management Effectiveness Tracking Tool can be completed by protected area staff or project staff, with input from other protected area staff. The tracking tool has been designed to be easily answered by those managing the protected area without any additional research.

All sections of the tracking tool should be completed. There are two sections:

1. **Datasheet** which details key information on the site, its characteristics and management objectives and includes an overview of WWF/World Bank involvement.
2. **Assessment Form**: the assessment form includes three distinct sections, all of which should be completed.
 - **Questions and scores**: the main part of the assessment form is a series of 30 questions that can be answered by *assigning a simple score ranging between 0 (poor) to 3 (excellent)*. A series of four alternative answers are provided against each question to help assessors to make judgements as to the level of score given. *Questions that are not relevant to a particular protected area should be omitted*, with a reason given in the comments section (for example questions about use and visitors will not be relevant to a protected area

managed according to the IUCN protected area management Category Ia). In addition, there are six supplementary questions which elaborate on key themes in the previous questions and provide additional information and points. This is, inevitably, an approximate process and there will be situations in which none of the four alternative answers appear to fit conditions in the protected area very precisely. We suggest that you choose the answer that is nearest and use the comments section to elaborate.

- **Comments:** a box next to each question allows for *qualitative judgements to be justified* by explaining why they were made (this could range from personal opinion, a reference document, monitoring results or external studies and assessments – the point being to give anyone reading the report an idea of why the assessment was made). In this section we also suggest that respondents comment on the role/influence of WWF or World Bank projects if appropriate. On some occasions suggestions are made about what might be covered in the comments column.
 - **Next Steps:** for each question respondents are asked to identify a long-term management need to further adaptive management at the site, if this is relevant.
3. **Final Score :** a final total of the score from completing the assessment form can be *calculated as a percentage of scores from those questions that were relevant to a particular protected area*. (So for example if 5 questions are believed to be irrelevant (and this is justified in the comments column) then the final score would be multiplied by 29/24 to offset the fact that some questions were not applied.) If the additional questions are relevant to the protected area, add the additional score to the total if they are relevant and omit them if they are not.

Disclaimer: The whole concept of “scoring” progress is fraught with difficulties and possibilities for distortion. The current system assumes, for example, that all the questions cover issues of equal weight, whereas this is not necessarily the case. Accuracy might be improved by weighting the various scores although this would provide additional challenges in deciding differing weightings. In the current version a simple scoring system is maintained, but the limitations of this approach should be recognised.

Reporting Progress at Protected Area Sites: Data Sheet

Name of protected area			
Location of protected area (country and if possible map reference)			
Date of establishment (distinguish between agreed and gazetted*)		Agreed	Gazetted
Ownership details (i.e. owner, tenure rights etc)			
Management Authority			
Size of protected area (ha)			
Number of staff	Permanent	Temporary	
Budget			
Designations (IUCN category, World Heritage, Ramsar etc)			
Reasons for designation			
Brief details of World Bank funded project or projects in PA			
Brief details of WWF funded project or projects in PA			
Brief details of other relevant projects in PA			
List the two primary protected area objectives			
Objective 1			
Objective 2			
List the top two most important threats to the PA (and indicate reasons why these were chosen)			
Threat 1			
Threat 2			
List top two critical management activities			
Activity 1			
Activity 2			

Date assessment carried out: _____

Name/s of assessor: _____

* Or formally established in the case of private protected areas

Issue	Criteria	Score	Comments	Next steps
1. Legal status Does the protected area have legal status? <i>Context</i>	The protected area is not gazetted	0	<i>Note:</i> see fourth option for private reserves	
	The government has agreed that the protected area should be gazetted but the process has not yet begun	1		
	The protected area is in the process of being gazetted but the process is still incomplete	2		
	The protected area has been legally gazetted (or in the case of private reserves is owned by a trust or similar)	3		
2. Protected area regulations Are inappropriate land uses and activities (e.g. poaching) controlled? <i>Context</i>	There are no mechanisms for controlling inappropriate land use and activities in the protected area	0		
	Mechanisms for controlling inappropriate land use and activities in the protected area exist but there are major problems in implementing them effectively	1		
	Mechanisms for controlling inappropriate land use and activities in the protected area exist but there are some problems in effectively implementing them	2		
	Mechanisms for controlling inappropriate land use and activities in the protected area exist and are being effectively implemented	3		
3. Law enforcement Can staff enforce protected area rules well enough? <i>Context</i>	The staff have no effective capacity/resources to enforce protected area legislation and regulations	0	<i>Possible issue for comment:</i> What happens if people are arrested?	
	There are major deficiencies in staff capacity/resources to enforce protected area legislation and regulations (e.g. lack of skills, no patrol budget)	1		
	The staff have acceptable capacity/resources to enforce protected area legislation and regulations but some deficiencies remain	2		
	The staff have excellent capacity/resources to enforce protected area legislation and regulations	3		
4. Protected area objectives Have objectives been agreed? <i>Planning</i>	No firm objectives have been agreed for the protected area	0		
	The protected area has agreed objectives, but is not managed according to these objectives	1		
	The protected area has agreed objectives, but these are only partially implemented	2		
	The protected area has agreed objectives and is managed to meet these objectives	3		
5. Protected area design Does the protected area need enlarging,	Inadequacies in design mean achieving the protected areas major management objectives of the protected area is impossible	0	<i>Possible issue for comment:</i> does the protected area contain different management zones and are	
	Inadequacies in design mean that achievement of major objectives are constrained to some extent	1		

Issue	Criteria	Score	Comments	Next steps
corridors etc to meet its objectives?	Design is not significantly constraining achievement of major objectives, but could be improved	2	these well maintained?	
<i>Planning</i>	Reserve design features are particularly aiding achievement of major objectives of the protected area	3		
6.1.1.1.1.1.1 6. Protected area boundary demarcation Is the boundary known and demarcated? <i>Context</i>	The boundary of the protected area is not known by the management authority or local residents/neighbouring land users	0	<i>Possible issue for comment:</i> are there tenure disagreements affecting the protected area?	
	The boundary of the protected area is known by the management authority but is not known by local residents/neighbouring land users	1		
	The boundary of the protected area is known by both the management authority and local residents but is not appropriately demarcated	2		
	The boundary of the protected area is known by the management authority and local residents and is appropriately demarcated	3		
7. Management plan	There is no management plan for the protected area	0		
Is there a management plan and is it being implemented? <i>Planning</i>	A management plan is being prepared or has been prepared but is not being implemented	1		
	An approved management plan exists but it is only being partially implemented because of funding constraints or other problems	2		
	An approved management plan exists and is being implemented	3		
Additional points <i>Planning</i>	The planning process allows a adequate opportunity for key stakeholders to influence the management plan	+1		
	There is an established schedule and process for periodic review and updating of the management plan	+1		
	The results of monitoring, research and evaluation are routinely incorporated into planning	+1		
8. Regular work plan	No regular work plan exists	0		
Is there an annual work plan? <i>Planning/Outputs</i>	A regular work plan exists but activities are not monitored against the plan's targets	1		
	A regular work plan exists and actions are monitored against the plan's targets, but many activities are not completed	2		
	A regular work plan exists, actions are monitored against the plan's targets and most or all prescribed activities are completed	3		
9. Resource inventory	There is little or no information available on the critical habitats, species and cultural values of the protected area	0		

Issue	Criteria	Score	Comments	Next steps
Do you have enough information to manage the area? <i>Context</i>	Information on the critical habitats, species and cultural values of the protected area is not sufficient to support planning and decision making	1		
	Information on the critical habitats, species and cultural values of the protected area is sufficient for key areas of planning/decision making but the necessary survey work is not being maintained	2		
	Information concerning on the critical habitats, species and cultural values of the protected area is sufficient to support planning and decision making and is being maintained	3		
10. Research Is there a programme of management-orientated survey and research work? <i>Inputs</i>	There is no survey or research work taking place in the protected area	0		
	There is some <i>ad hoc</i> survey and research work	1		
	There is considerable survey and research work but it is not directed towards the needs of protected area management	2		
	There is a comprehensive, integrated programme of survey and research work, which is relevant to management needs	3		
11. Resource management Is the protected area adequately managed (e.g. for fire, invasive species, poaching)? <i>Process</i>	Requirements for active management of critical ecosystems, species and cultural values have not been assessed	0		
	Requirements for active management of critical ecosystems, species and cultural values are known but are not being addressed	1		
	Requirements for active management of critical ecosystems, species and cultural values are only being partially addressed	2		
	Requirements for active management of critical ecosystems, species and cultural values are being substantially or fully addressed	3		
12. Staff numbers Are there enough people employed to manage the protected area? <i>Inputs</i>	There are no staff	0		
	Staff numbers are inadequate for critical management activities	1		
	Staff numbers are below optimum level for critical management activities	2		
	Staff numbers are adequate for the management needs of the site	3		
13. Personnel management Are the staff managed well enough?	Problems with personnel management constrain the achievement of major management objectives	0		
	Problems with personnel management partially constrain the achievement of major management objectives	1		
	Personnel management is adequate to the achievement of major management objectives but could be improved	2		

Issue	Criteria	Score	Comments	Next steps
<i>Process</i>	Personnel management is excellent and aids the achievement major management objectives	3		
14. Staff training	Staff are untrained	0		
Is there enough training for staff?	Staff training and skills are low relative to the needs of the protected area	1		
	Staff training and skills are adequate, but could be further improved to fully achieve the objectives of management	2		
	Staff training and skills are in tune with the management needs of the protected area, and with anticipated future needs	3		
<i>Inputs/Process</i>				
15. Current budget	There is no budget for the protected area	0		
Is the current budget sufficient?	The available budget is inadequate for basic management needs and presents a serious constraint to the capacity to manage	1		
	The available budget is acceptable, but could be further improved to fully achieve effective management	2		
<i>Inputs</i>	The available budget is sufficient and meets the full management needs of the protected area	3		
16. Security of budget	There is no secure budget for the protected area and management is wholly reliant on outside or year by year funding	0		
Is the budget secure?	There is very little secure budget and the protected area could not function adequately without outside funding	1		
	There is a reasonably secure core budget for the protected area but many innovations and initiatives are reliant on outside funding	2		
<i>Inputs</i>	There is a secure budget for the protected area and its management needs on a multi-year cycle	3		
17. Management of budget	Budget management is poor and significantly undermines effectiveness	0		
Is the budget managed to meet critical management needs?	Budget management is poor and constrains effectiveness	1		
	Budget management is adequate but could be improved	2		
	Budget management is excellent and aids effectiveness	3		
<i>Process</i>				
18. Equipment	There is little or no equipment and facilities	0		

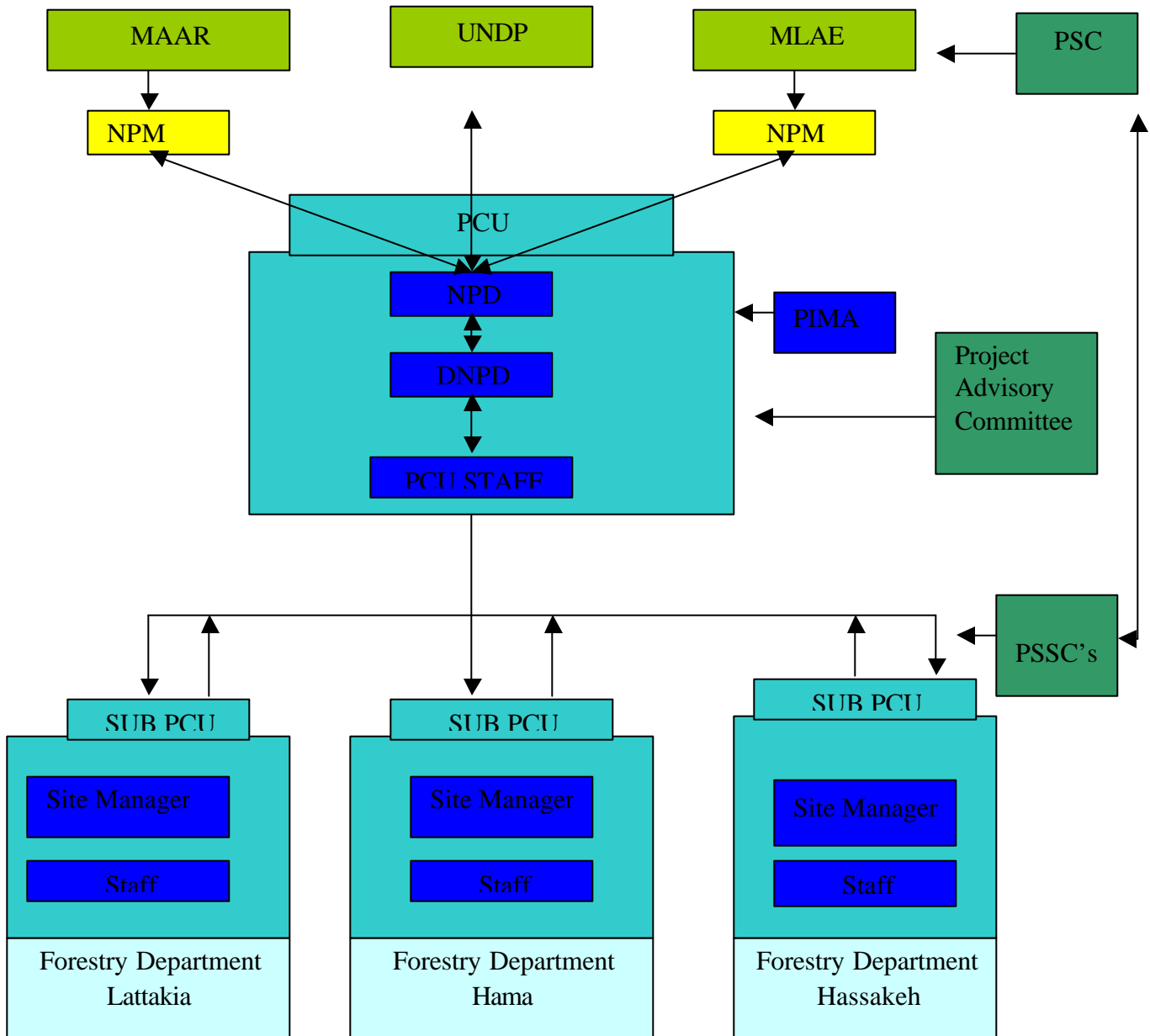
Issue	Criteria	Score	Comments	Next steps
Is equipment adequately maintained? <i>Process</i>	There is some equipment and facilities but these are wholly inadequate	1		
	There is equipment and facilities, but still some major gaps that constrain management	2		
	There is adequate equipment and facilities	3		
19. Maintenance of equipment Is equipment adequately maintained? <i>Process</i>	There is little or no maintenance of equipment and facilities	0		
	There is some <i>ad hoc</i> maintenance of equipment and facilities	1		
	There is maintenance of equipment and facilities, but there are some important gaps in maintenance	2		
	Equipment and facilities are well maintained	3		
20. Education and awareness programme Is there a planned education programme? <i>Process</i>	There is no education and awareness programme	0		
	There is a limited and <i>ad hoc</i> education and awareness programme, but no overall planning for this	1		
	There is a planned education and awareness programme but there are still serious gaps	2		
	There is a planned and effective education and awareness programme fully linked to the objectives and needs of the protected area	3		
21. State and commercial neighbours Is there co-operation with adjacent land users? <i>Process</i>	There is no contact between managers and neighbouring official or corporate land users	0		
	There is limited contact between managers and neighbouring official or corporate land users	1		
	There is regular contact between managers and neighbouring official or corporate land users, but only limited co-operation	2		
	There is regular contact between managers and neighbouring official or corporate land users, and substantial co-operation on management	3		
22. Indigenous people Do indigenous and traditional peoples resident or regularly using the PA have input to management decisions? <i>Process</i>	Indigenous and traditional peoples have no input into decisions relating to the management of the protected area	0		
	Indigenous and traditional peoples have some input into discussions relating to management but no direct involvement in the resulting decisions	1		
	Indigenous and traditional peoples directly contribute to some decisions relating to management	2		
	Indigenous and traditional peoples directly participate in making decisions relating to management	3		

Issue	Criteria	Score	Comments	Next steps
23. Local communities Do local communities resident or near the protected area have input to management decisions? <i>Process</i>	Local communities have no input into decisions relating to the management of the protected area	0		
	Local communities have some input into discussions relating to management but no direct involvement in the resulting decisions	1		
	Local communities directly contribute to some decisions relating to management	2		
	Local communities directly participate in making decisions relating to management	3		
Additional points <i>Outputs</i>	There is open communication and trust between local stakeholders and protected area managers	+1		
	Programmes to enhance local community welfare, while conserving protected area resources, are being implemented	+1		
24. Visitor facilities Are visitor facilities (for tourists, pilgrims etc) good enough? <i>Outputs</i>	There are no visitor facilities and services	0	<i>Possible issue for comment:</i> Do visitors damage the protected area?	
	Visitor facilities and services are inappropriate for current levels of visitation or are under construction	1		
	Visitor facilities and services are adequate for current levels of visitation but could be improved	2		
	Visitor facilities and services are excellent for current levels of visitation	3		
25. Commercial tourism Do commercial tour operators contribute to protected area management? <i>Process</i>	There is little or no contact between managers and tourism operators using the protected area	0	<i>Possible issue for comment:</i> examples of contributions	
	There is contact between managers and tourism operators but this is largely confined to administrative or regulatory matters	1		
	There is limited co-operation between managers and tourism operators to enhance visitor experiences and maintain protected area values	2		
	There is excellent co-operation between managers and tourism operators to enhance visitor experiences, protect values and resolve conflicts	3		
26. Fees If fees (tourism, fines) are applied, do they help protected area management? <i>Outputs</i>	Although fees are theoretically applied, they are not collected	0		
	The fee is collected, but it goes straight to central government and is not returned to the protected area or its environs	1		
	The fee is collected, but is disbursed to the local authority rather than the protected area	2		
	There is a fee for visiting the protected area that helps to support this and/or other protected areas	3		
6.1.1.1.1.1.2 27. Condition assessment	Important biodiversity, ecological and cultural values are being severely degraded	0	<i>Possible issue for comment:</i> It is important to provide details of the biodiversity, ecological or cultural values being affected	
	Some biodiversity, ecological and cultural values are being severely degraded	1		
	Some biodiversity, ecological and cultural values are being partially degraded but the most important values have not been significantly impacted	2		

Issue	Criteria	Score	Comments	Next steps
Is the protected area being managed consistent to its objectives? <i>Outcomes</i>	Biodiversity, ecological and cultural values are predominantly intact	3	being affected	
6.1.1.1.1.1.3 Additional points <i>Outputs</i>	There are active programmes for restoration of degraded areas within the protected area and/or the protected area buffer zone	+1		
28. Access assessment Are the available management mechanisms working to control access or use? <i>Outcomes</i>	Protection systems (patrols, permits etc) are ineffective in controlling access or use of the reserve in accordance with designated objectives	0		
	Protection systems are only partially effective in controlling access or use of the reserve in accordance with designated objectives	1		
	Protection systems are moderately effective in controlling access or use of the reserve in accordance with designated objectives	2		
	Protection systems are largely or wholly effective in controlling access or use of the reserve in accordance with designated objectives	3		
29. Economic benefit assessment Is the protected area providing economic benefits to local communities? <i>Outcomes</i>	The existence of the protected area has reduced the options for economic development of the local communities	0	<i>Possible issue for comment:</i> how does national or regional development impact on the protected area?	
	The existence of the protected area has neither damaged nor benefited the local economy	1		
	There is some flow of economic benefits to local communities from the existence of the protected area but this is of minor significance to the regional economy	2		
	There is a significant or major flow of economic benefits to local communities from activities in and around the protected area (e.g. employment of locals, locally operated commercial tours etc)	3		
30. Monitoring and evaluation <i>Planning/Process</i>	There is no monitoring and evaluation in the protected area	0		
	There is some <i>ad hoc</i> monitoring and evaluation, but no overall strategy and/or no regular collection of results	1		
	There is an agreed and implemented monitoring and evaluation system but results are not systematically used for management	2		
	A good monitoring and evaluation system exists, is well implemented and used in adaptive management	3		
TOTAL SCORE				

Annex 1.7

Project organizational structure



Section I I

Project Brief 61-94
Annex A

PROJECT BRIEF

1. IDENTIFIERS

PROJECT NUMBER: PIMS: 227
TITLE: Biodiversity Conservation and Protected Area Management
DURATION: 7 years
IMPLEMENTING AGENCY: United Nations Development Programme (UNDP)
EXECUTING AGENCIES: Ministry of State for Environmental Affairs,
 Ministry of Agriculture and Agrarian Reform
REQUESTING COUNTRY: Syria
ELIGIBILITY: CBD ratification: 10 December 1995
 Notification of participation in the restructured GEF:
GEF FOCAL AREA: Biodiversity
PROGRAMMING FRAMEWORK: OP 1, Arid and semi-arid ecosystems, crosscutting with land degradation

2. SUMMARY: The project will demonstrate practical methods of protected area management that effectively conserve biodiversity and protect the interests of local communities while supporting the consolidation of an enabling environment that will facilitate replication throughout the country. In order to achieve this objective, the project will produce three outcomes: (i) Policies, legislation and institutional systems that allow for the wise selection and effective operation of protected areas that conserve globally significant biodiversity; (ii) Effective techniques for PA management and biodiversity conservation have been demonstrated at three sites totaling approximately 60,000 ha. and are available for replication, and; (iii) Sustainable use of natural resources in and around protected areas has been demonstrated through the development and implementation of a program for alternative sustainable livelihoods and community resource management.

3. COSTS AND FINANCING (US\$ MILLION)

GEF:	Project	\$3,291,850	
	PDF-B	\$194,000	
	Sub-total	\$3,485,850	
Confirmed Co-financing:			
	Government of Syria – Project	\$2,407,000 (In kind)	
	Government of Syria – PDF-B	\$27,000 (In kind)	
	UNDP TRAC	\$1,000,000 (In cash)	
	Sub-total	\$3,434,000	
PROJECT TOTAL		\$6,919,850	

4. ASSOCIATED FINANCING: Ministry of Environment project for marine protected areas, including Um al Toyour, with 120,000 Euros of support from the European Union.

5. GEF FOCAL POINT ENDORSEMENT

Name: Emad Hassoun **Position:** Deputy Minister,
 Ministry of Local administration and Environment, P.O. Box 3773

Date:

7. IMPLEMENTING AGENCY CONTACT:

Lamia Mansour , Acting Regional Coordinator, UNDP-GEF Beirut, Tel: 961-1-981301, ext. 1734;
 Fax: (961-1-981-521), E-mail: lamia.mansour@undp.org

List of Acronyms

AEWA	African-Eurasian Migratory Waterbird Agreement
CBD	Convention on Biological Diversity
GEF	Global Environment Facility
HCA	High Commission for Afforestation
HCES	High Commission for Environmental Safety
ICARDA	International Center for Agricultural Research in Dry Areas
IFAD	International Fund for Agricultural Development
IPGRI	International Plant Genetic Resource Institute
IUCN	International Union for the Conservation of Nature
MAAR	Ministry of Agriculture and Agrarian Reform
MAAR-DBPAM	Ministry of Agriculture and Agrarian Reform – Division of Biodiversity and Protected Area Management
MLAE	Ministry of State for Environmental Affairs
MLAE-DBPA	Ministry of Local Administration and Environment – Directorate of Biodiversity and Protected Areas
MSP	Medium-size Project
NBSAP	National Biodiversity Strategy and Action Plan
NBU	National Biodiversity Unit
NPA	Nature Protected area
NPD	National Project Director
NPM	National Project Manager
PCU	Project Co-ordination Unit
PIM	Project Implementation Meeting
PIME	Project Implementation and Monitoring Expert
PSC	Project Steering Committee
RaPA	Restoration Protected Area
RePA	Rangeland Protected Area
SMPR	Secretariat-Managed Project Review
TPR	Tripartite Review
UNDP	United Nations Development Programme

COUNTRY DRIVENNESS

1. In accordance with Article six of the Convention on Biological Diversity, Syria has developed a National Biodiversity Strategy and Action Plan (NBSAP).²⁸ The NBSAP, which was adopted by Syria's Higher Council for Environmental Safety on 13 May 2002, was prepared through a participatory process involving a broad range of national and local stakeholders. The NBSAP includes fifteen objectives, at least ten of which are supported by the present project. **Table 1** highlights the manner in which the project responds to the specific objectives of the NBSAP.

Table 1: UNDP/GEF Syria biodiversity project and the NBSAP

NBSAP Focal area	Objective	GEF project activities specifically called for by NBSAP
Conservation and management of 'natural' biodiversity	1- To conserve and manage terrestrial biodiversity	Control harvesting of wood for charcoal production, control forest fires, prevent illegal hunting, limit road construction
	4 – To conserve and manage a system of protected areas	Systemic strengthening; Boundary surveys, ecological monitoring, management planning, awareness raising among officials and local people, enforce ban on hunting in PAs
	5- Benefits from wildlife	Survey wild plants, generating income from wild plants
Conservation and sustainable use of agricultural biodiversity	7- Conserve and sustainably use agricultural biodiversity	Rehabilitation of marginal and desertified lands using local plant species, integrated pest management
	9 – Conserve and sustainably use newly forested areas	Continue an (improved) afforestation program, involve farmer organizations in establishment and management of forests and afforested areas
	10 – Protect valuable plant and animal genetic resources	Implement laws that protect local varieties of cultivated trees, cooperate with international organizations to conserve plant genetic resources
Miscellaneous	11 – Environmental legislation and implementation of strategy	Create and / or update legislation related to wild flora, fauna and habitats, genetic resources
	12 – Achieve sustainable socio-economic development	Studies on the costs of environmental degradation and the economic benefits of conservation
	15 – Biodiversity education and public awareness	Awareness raising through outdoor activities, media
	16 – Arab, regional and international cooperation	Promote Arab, regional and international cooperation for exchange of experience, financial assistance and wider recognition of the conservation efforts in Syria

2. The project also provides timely support to the implementation of Syria's newly approved environment law, which came into affect on 8 July 2002 (see below, under 'Policy, legal and institutional context').

PROJECT CONTEXT

²⁸ Ministry of State for Environmental Affairs, Syrian Arab Republic. 15 February 2000. *National Biodiversity Strategy and Action Plan*. Damascus. Mimeo.

A. Environmental context

3. Syria is considered one of the most biologically diverse countries in the Mediterranean, distinguished by its rich and unique assemblages of globally significant biodiversity. It represents a transition zone between two regional centers of endemism, the Mediterranean and the Irano-Turanian. With a wide range of climatic, topographic and geomorphological characteristics, Syria supports remarkable habitat diversity ranging from evergreen oak forests in the northwest to sand dune deserts in the southeast. The precipitation gradient is notably varied between the high altitudes in the west and northwest (over 1,200 mm annually) and the southeastern plains and *badia* (less than 100 mm), leading to various phyto-geographical regions and habitats. These habitats include the Mediterranean coastal zone, levantine uplands, Irano-Turanian steppe, *badia*, north Syrian plateau, inland water and wetland ecosystems, and the Al-Asi depression, or *Ghota*. The overall rate of biodiversity endemism in Syria is estimated at 20%, which is considered high by dryland standards.

4. Syria represents a critical resting and wintering stop for migratory birds passing along the Western Palearctic flyway. Of some 352 bird species recorded in Syria, 155 are migratory.²⁹ Sixteen species are included in IUCN's Red List of Threatened Species, including the critically endangered Northern Bald Ibis, a colony of which was recently discovered breeding in the Al Badia region.³⁰ Syria holds a significant number of species whose world populations are wholly or largely restricted to the Middle East, e.g., the Syrian serin *Serinus syriacus*, Little bustard *Tetrax tetrax*, and the Black vulture *Aegypius monachus*. Twenty two sites across the country, totaling 630,000 ha., have been identified by BirdLife International as Important Bird Areas.³¹

5. As far as mammals are concerned, Syria supports several species included in IUCN's Red List, e.g., *Panthera pardus tulliana* - panther, *Equus hemippus* - the Syrian wild ass and the *Gazella subgutturosa* - Al-Reim). Out of the 125 mammals recorded in Syria, about 35 species are considered threatened or endangered at the national level (e.g. *Cervus elphus*, *Gazella dorcas*, *Gazella subgutturosa*, *Capra hircus* (Shami goat), *Bovis domasceena* (Syrian bovine), and five others (cheetah, lion, Capreolus [yahmour], dama-ayl, and castor) have been extirpated at the national level.

6. In addition to birds and mammals, Syria supports at least 143 species of reptiles and amphibians, and about 500 fish species. The actual figures are likely to be substantially higher given the paucity of data on Syria's reptiles and amphibians, and marine biota.

7. In terms of floristic biodiversity, Syria is considered one of the most biologically diverse countries in the Mediterranean Basin. It has over 3,500 plant species, of which about 700 species are considered threatened, and 300 species are endemic. The natural forest cover and rangeland habitats account for over 10 million ha, which is approximately 60% of the total land area.

B. Policy, legal and institutional context

8. At the global level, the Government of Syria has recognized the importance of conserving its nationally and globally significant biodiversity. It has ratified, *inter alia*, the Biodiversity Convention, the World Heritage Convention, the Ramsar Convention, and the protocol concerning Mediterranean Specially Protected Areas. In 2002, it joined the African-Eurasian Migratory Waterbird Agreement (AEWA).

²⁹ Baumgart, Wolfgang. 1995. *Die Vögel Syriens*. Heidelberg: Max Kasperek Verlag.

³⁰ See www.cnf.ca/media/july_10_02.html

³¹ See www.birdlife.net/sites/index.cfm

9. At the national level, a number of steps have been taken towards establishing a policy, legal and institutional framework for conservation of biological diversity. The Ministry of Local Administration and Environment (MLAE) was created in 1991 and given broad responsibilities to define rules and regulations in the area of environmental protection.³² In 1996, MLAE established a National Biodiversity Unit (NBU). One of the NBU's first tasks was the preparation of a National Country Study on Biological Diversity, which was published in 2000.³³ The NBU has also acted as the national executing agency for the preparation of the NBSAP.

10. Legal, policy and institutional steps towards the establishment of an effective system of protected areas (PAs) have taken longer to develop, despite their critical importance as a tool for conserving biodiversity. By the end of 1993, only two PAs (total appx. 35,000 ha) had been established in Syria: Al Talila (1991) and Jebel Abdul Aziz (1993).³⁴

11. The 1994 Forestry Law gave MAAR the right to establish three specific types of protected areas:

- **Nature protected areas (NPAs)** are created for the protection of a forest or an ecosystem because of its biodiversity. Grazing, cutting and agricultural practices are prohibited in nature protected areas.
- **Restoration protected areas (RePAs)** are created in areas affected with soil erosion or sand dune invasion, or any other kind of degradation which makes it necessary to stop all agricultural activities in the area. In many cases these areas are planted with trees.
- **Rangeland protected areas (RaPAs)** are created in the steppe, or *Badia*, to protect the pasture for sheep grazing. These protected areas are planted partly with *Atriplex* or *Slasola* shrubs to increase their carrying capacity for grazing. Reseeding methods are also used to rehabilitate degraded parts of the protected area. RaPAs are open for periodic controlled grazing during the dry season and in dry years. They constitute a feed reserve for sheep and demonstration sites for herders.³⁵

12. From 1994 to 1997, MAAR gazetted only one NPA (1,350 ha), the cedar and fir protected area in Slenfe. Meanwhile, two wetland PAs (total appx. 1,600 ha) were established during this period by the Ministry of Irrigation. From 1998 to 2002, eight new NPAs (total appx. 80,000 ha), all within forested or degraded forest ecosystems, were gazetted by MAAR, along with a significant extension to the area of the Jebel Abdul Aziz NPA.³⁶ Also, in 2000, a Marine Protected Area (MPA) was established by the Directorate of Ports at Um al Toyour.

13. Thus, as of December 2002, the extent of Syria's protected area management system could be summarized as follows:

- One protected area for rangeland (30,000 ha), established and managed by the Al Badia Department of MAAR;

³² Law No. 11, 22 August 1991.

³³ Ministry of Local Administration and Environment and United Nations Environment Programme. 2000. *National Country Study of Biological Diversity in Syrian Arab Republic*. Damascus.

³⁴ Al Talila was established by Decree No. 140 under Al Badia Protection Law. Jebel Abdul Aziz was originally established as a protected area of 4,240 ha.

³⁵ Personal communication with Prof. Youssef Barkoudah, 5 December 1993. See also Barkoudah, Youssef. 15 August 2001.

"Institutional Analysis of Biodiversity Conservation and PA Management." Report prepared under the PDF-B phase of the UNDP/GEF project for Biodiversity Conservation and Protected Area Management in Syria. Mimeo.

³⁶ Decision 27/t of 15 November 2002.

- Ten NPAs (total appx. 125,000 ha), all in naturally forested, degraded and/or afforested areas, established by the Forestry Department of MAAR under the 1994 Forestry Law and managed by that department.³⁷
- Two wetland protected areas (total appx. 1,600 ha) established and managed by the Ministry of Irrigation.
- One marine protected area established and managed by the Directorate of Ports.

14. MAAR's approach to PA management has thus far placed little emphasis on the need to conserve biodiversity at these sites. As a result, and with the increasing recognition that Syria's PAs are not yet providing effective protection of the country's biodiversity, new institutional approaches have been developed. One such approach has been to strengthen the role of MLAE, and the NBU in particular, in developing the system of PAs. Thus, according to the NBSAP, "[T]he NBU is expected to play an important role in the development of a comprehensive system of protected areas in Syria."³⁸

15. The newly enacted Environment Law No. 50 (2002) represents significant progress towards defining MLAE's role in PA management. This Law gives MLAE the rights and responsibilities to: (i) define the conditions for the establishment of protected areas and national parks, and; (ii) monitor these protected areas, each according to its components and characteristics. The new law also calls for the establishment of an Environmental Fund which will be utilized for various environmental projects, including support for the establishment and effective management of PAs.³⁹

16. MAAR, for its part, has taken steps aimed at improving the effectiveness of its management efforts. In particular, the Ministry has recently established a department for biodiversity, with a specific division for protected areas.⁴⁰ A separate decision has established another new department within MAAR, this one for grazing, protected areas and biodiversity conservation in the Al Badia region.⁴¹

17. Both MAAR and MLAE extend beyond Damascus with staff and operations at provincial level. In the case of MAAR, provincial-level Forestry Departments are responsible for day-to-day management of nature reserves and other forest areas. These are well staffed and fairly well equipped. MLAE has a more limited representation at provincial level, with small units operating from provincial capitals with little on-the-ground operational capacity. To date, these units have played no role in protected area management and indeed sorely lack capacity to do so.

18. In addition to MLAE and MAAR, several other Governmental bodies having roles related to protected area management should be mentioned:

- *The Higher Council for Environmental Safety (HCES)*: The HCES was established by Decree #11 of 1991. Headed by the Prime Minister, it is the highest-level decision-making body on environmental matters, with the power to adopt environmental policies, regulations and standards. As noted above, HCES was responsible for adopting the NBSAP.
- *The High Commission for Afforestation (HCA)*: The HCA was established by Presidential Decision No. 108 of 1977 with a mandate to promote the planting of both forest and fruit trees, with the eventual goal of reaching 15% forest cover. Five ministries as well as five popular organizations participated in the HCA. Annual targets aimed at planting up to 30 million forest

³⁷ One of these, the coastal and marine reserve of Um Al-Touyur, has been established together with the Directorate of Ports, which is responsible for the marine portion of the reserve.

³⁸ Op. cit., note 1.

³⁹ See Environment Law No. 50, Chapter 2, paragraphs 10, 18 and 19.

⁴⁰ Decision No. 55/t of 2 October 2002.

⁴¹ Decision No. 57 of 2 October 2002.

trees and 12 million fruit trees on 24,000 ha. Afforestation efforts led by the HCA were implemented by MAAR. In 2002, the HCA was dissolved, with MAAR taking over additional responsibility for planning, as well as implementing, afforestation programs.

- *Higher Committee for Protected Areas*: This was a recommendation from the NBSAP that requires government endorsement.
- *The Ministry of Irrigation* currently manages two wetland-protected areas. One of these was short-listed as a potential demonstration site for the present project.
- *The Directorate of Ports* has established one marine protected area, at Um al Toyour.

19. The adequacy and implications of the above legal, policy and institutional framework will be assessed in the following section on “Baseline Assessment.”

C. Socio-economic context

20. According to UNDP’s 2002 Human Development Report, Syria ranks number 108 out of 173 countries studied. Life expectancy at birth is relatively high at 71.2 years, while adult literacy stands at 74.4% and GDP per capita is estimated at US\$3,556.⁴² Population growth rates are high, with an estimated 3.1 percent rate of population growth from 1975-2000. Nearly half of the population (48.6%) resides outside of urban areas.⁴³

21. The recent establishment of a number of NPAs in Syria has had the effect of restricting access by local populations and others such as transhumants to resources, including land, water, timber, wildlife and wild plants (both for livestock grazing and collection), which had previously been utilized by these communities. Indeed, some communities have seen their villages become ‘islands’ within newly established NPAs. This situation has created livelihood issues as well as no little amount of conflict, particularly between local villagers and forestry department officials.

22. Recent awareness concerning the importance of input by local stakeholders has led to growth in the number of local groups involved in one way or another in environmental protection activities. These include recent campaigns by MLAE and MAAR, as well as by NGOs, on issues such as water conservation and reforestation.

23. The socio-economic context within project demonstration sites and their peripheries is described in the following section on “Baseline Assessment.”

D. Technical co-operation context

24. One of the protected areas administered by MAAR – the Arz/El-Shouh protected area near Slenfe – was selected in 1998 as the site for a World Bank/GEF Medium-sized Project (MSP). The \$1.4 million project, with \$750,000 in support from GEF, has the twin aims of protecting biodiversity at the pilot PA, while also strengthening the Government’s overall capacity to protect and manage biodiversity. Planned outputs include: (i) development of enabling legislation; (ii) institutional strengthening of MLAE and MAAR; (iii) extension and legal designation of the pilot PA; (iv) development and implementation of a management plan, and; (v) public awareness program.

25. The Arz/El Shouh MSP project has been carefully monitored during the course of developing the present project brief. As a result, the design of the present project reflects a deliberate effort to avoid the

⁴² United Nations Development Programme. 2002. *Human Development Report 2002*. New York: Oxford University Press. The GDP figure used is adjusted to reflect purchasing power parity (PPP).

⁴³ Ibid.

numerous implementation difficulties faced by the Arz/El Shouh project. In addition, the latter was one of fifteen projects selected for the pilot phase of Secretariat-Managed Project Reviews (SMPR) in 2002. The SMPR took place in October/November 2002, and its findings have been carefully reviewed and taken into account during the final stage of designing the present project (see below, sub-section on Lessons Learned from Previous Projects –also para. 121).

26. Other recent and ongoing technical co-operation projects of relevance include the following:

- From 1998 to 2001, the MLAE's National Biodiversity Unit implemented a Biodiversity Strategy and Action Plan project valued at \$194,000. The project was designed to build on recommendations put forward in the Syrian Country Study on Biological Diversity.
- A UNDP-GEF Regional project "Conservation and Sustainable Use of Dryland Agro-biodiversity in Jordan, Lebanon, Syria and the Palestinian Authority" has been underway since 1997. The project deals with the conservation of important relatives and land races of 13 agricultural species. MAAR is the executing agency for the Syrian national component of the project and will therefore be responsible for ensuring co-ordination. The project managers of the above two projects are observing members of the current project steering committee and have attended most of the PDF-b consultation workshops.
- Within the framework of the Mediterranean Action Plan, the European Union is providing support for preparation of a marine biological survey and management plan for a recently established PA at Oum al Toyour.
- AN IFAD/AFESD project for the central and coastal regions of Syria is being implemented by MAAR. It covers around 511 villages in the northern part of Lattakia and Tartous Governorates, as well as Homs and Ham and has a total budget of US\$117.2 million. Relevant project activities include: land reclamation, development of livestock production and modernization of irrigation.

BASELINE ASSESSMENT

27. The present project proposal was prepared with the support of a PDF-B grant from the GEF. The PDF-B process included a careful process of site selection.⁴⁴ A quantitative and qualitative methodology was developed for this purpose – including a total of 12 criteria for national and global significance – and was used to rank 13 candidate sites. From this analysis, a short-list of five sites emerged. An interdisciplinary team of national and international experts visited short-listed sites and made recommendations on the final site selection; final site selection was the responsibility of a Project Steering Committee. Emerging from this process is a set of three sites that are both globally significant in their own right as well as representative of the critical issues facing biodiversity in Syria and thus amenable to replication and achievement of further global biodiversity gains.

28. Following selection of the demonstration sites, each chosen site was the subject of detailed investigations and reporting by a team of national experts in the following fields of study: agronomy, fauna, flora, socio-economy, ecotourism and sociology.⁴⁵ These studies were then synthesized into site profiles for each site.⁴⁶ The following summary descriptions of the sites, their baseline activities and threats have been derived from these expert reports and in-depth site profiles.

A. Baseline description and assessment at demonstration sites

I. AL FRONLOQ (4,500 HA.)

⁴⁴ Details of the site selection process are presented in Annex K.

⁴⁵ Individual sectoral studies for each site are available through the UNDP office in Damascus.

⁴⁶ Site profiles are available from the UNDP Syria office.

29. **Physical and biological overview:** The Al Fronloq protected area (see **Annex E, Map 1**) is located in the Al-Bayer sub-district of the governorate of Lattakia in northwestern Syria, about 47 kilometers north of Lattakia city. The Lattakia-Kassab road forms the western border of the protected area, while the Syrian-Turkish border forms its northern border. From the East, a 50-100m strip bounds the site to the east of nahr Al Kabier Al shamali. Agricultural lands of Al-saraf, Zahie, Al-kabier, Biet sharda and Kantara villages form the southern borders. The size of the project site is 4,500 hectares.⁴⁷

30. Parent materials at the site are composed of ultra basic green rocks of an igneous nature, which are quite unique in Syria and in the Eastern Mediterranean. These include peridotites, pyroxenes, gabbros, serpentine and amphibolites. Peridotites and pyroxenes, have a high content of Mg and are low in SiO₂ with very low sodium and potash content. These rocks are impermeable to water and plant roots and have low water-holding capacity. With few exceptions, soils formed on these rocks are shallow – less than 20 cm in most cases – and not well developed.⁴⁸ On the other hand, gabbros and amphibolites contain more balanced nutrients and have a greater capacity for holding water than the other types of rocks mentioned.

31. Climatically, the area falls within the cool variant of the sub-humid to humid bio-climatic zone of the Mediterranean climate. Average rainfall is approximately 1,160 mm, with the highest rainfall levels typically occurring in winter.⁴⁹

32. In ecological terms, the protected area falls within the Eu-Mediterranean to the Upper Mediterranean vegetation zones. Along with the micro-climatic features of the protected area, topography and soil properties play an important role in determining species associations and species occurrences. Thus, all of these factors have contributed to the appearance of the polyclimax vegetation in the area, where various forest assemblages can be seen.⁵⁰ The area contains two ecosystems which make a gradual transition from one to the other. Deciduous trees are concentrated in the middle of the protected area with penetration into surrounding Brutia pine forests.

33. The core area of the Fronloq site is composed of pure deciduous trees of *Quercus cerris* subsp. *pseudocerris*, which dominates the forest. However, this situation is limited to a few locations. These include humid western, northern and eastern slopes and sites where the soil is deep and holds enough water to support lush vegetation. Deciduous species are also found along watercourses and depressions. The site also contains several ecotypes of Brutia pine as well as wild relatives of fruit trees. Brutia pine ecotypes are distinguished from each other by several characteristics such as drought and cold tolerance, tolerance to soil nutrient imbalance, etc.⁵¹

34. The Fronloq ecosystem is quite distinctive for Syria as it represents the climax vegetation in the area. The ecosystem itself is composed of an ecotone of unique assemblages of species of European origin, which are remnants of the ancient climate reign in Syria, mingled with Mediterranean and Irano-Turanian species. The ecosystem is considered fragile and sensitive to pressures.

⁴⁷ This figure includes approximately 3,000 ha that were recommended for gazetting by the project team during a site visit. This proposal remains under consideration by MAAR

⁴⁸ See Chalabi, M.N. 1980. *Analyse phytosociologique, phytoecologique, dendrometrique et dendroclimatologique des forets de Quercus cerris subsp. Pseudocerris et contribution a l'etude taxonomique du genre Quercus en Syrie*. These de doctorat en sciences, Universite d'Aix – Marseille III, France

⁴⁹ See ACSAD. 1998. Climatic Data Base. Damascus – Syria: ACSAD; Nahal, I. (1981). "The Mediterranean Climate from a Biological Viewpoint." In: DI Castri, F., Dw. Goodall and RL. Specht (eds.), *Ecosystems of the World, vol.11. Mediterranean-Type Shrublands*. Elsevier, Amsterdam, pp.63-86.

⁵⁰ See Nahal, I. 1974. "Reflexions et recherches sur la notion de climat de la vegetation sous le climat Mediterranean oriental." *Ann. Univ. Provence, Biol. Ecol. Mediterr.*, 1(1):1-10.

⁵¹ Nahal, I. 1982. *Pinus brutia Ten. and its Forests in Syria and Eastern Mediterranean Countries* (in Arabic). Aleppo: Aleppo University Publications.

35. The site contains about 325 vascular plant species, which belongs to 232 genus and 73 families. Nearly 50 percent of these species are of Mediterranean origin and 40% of them are endemic to the Eastern Mediterranean region (Lebanon, Syria and Turkey). The site also contains at least nine endemic species.⁵² The number of endemic species on the green rocks north of Lattakia and across the border with Turkey reaches 26. More than 40 species are rare or endangered in the site as well as in Syria as a whole. Nearly 30 species belong to Euro-Siberian vegetation, which was present in Syria as long ago as the 8th millennium BC, and is now absent except remnants found at the site.

36. Due to its geographic location, the Fronloq site constitutes a bridge between southern Europe and Asia Minor for migratory wildlife species that cross the area. Furthermore, the site is one of the stopover points for various globally threatened and migratory birds, including Black vulture (*Aegypius monachus*), Golden eagle (*Aquila chrysaetos homeyeri*) and the Common Crane (*Grus grus*).⁵³ A number of globally endemic and endangered species in Syria in particular and the Middle East in general have been recorded at the site.

37. In addition to the above-mentioned migratory species, important resident bird species recorded at the site include: Syrian serin (*Serinus syriacus*), Syrian woodpecker (*Dendrocopos syriacus*), European roller (*Coracias garrulous*), Finsch's wheatear (*Oenanthe finschii*) and masked shrike (*Lanius nubicus*). Recorded mammals, some of which have rarely been seen in recent years, include the wolf (*Canis lupus*), Roe deer (*Capreolus capreolus*), red fox (*Vulpes vulpes*), striped hyaena (*Hyaena hyaena*) and fallow deer (*Gazella dama*).

38. Site management and policy: Al-Fronloq was declared an NPA by MAAR Ministerial decision 17/T of 18 May 1999. Originally the total area targeted by this decision was 1,500 ha, which includes the core area of the pure *Quercus pseudocerris* assemblage within the site. However, the initial survey by the team member of national and international consultants envisaged the extension of the protected area to 4,500 ha to include the surrounding Brutia pine assemblages and other habitats. This proposal remains under consideration by MAAR.

39. MAAR's Forestry Department manages the site through its office in Lattakia. The two relevant sub-districts' offices of forestry in Qastal Mouaf and Al-Rabeeha manage the site at ground level. There are two fire lookout posts in the protected area, along with one forest ranger station. The fire lookout posts are manned 24 hours most of the year (9 months). They are part of a series of posts built up by MAAR to combat forest fires. A number of forest guards, some of whom are motorized, are on daily duty at the site. During the fire season (mostly summer and fall), firefighting teams are on alert along major roads in nearby forest areas and at the site itself.

40. Socio-economic context: The total population living in and immediately surrounding the protected area is estimated at 1,500 persons, distributed amongst the following villages: Al-Aterah (300), Al-Kabier (400), Al-Khadra (550), and Al-Kantara (250). Most of these villages are centered on water sources and natural springs. The population of the area is of varying ethnic origins. For instance, Al-Khadra is about 10 percent Arab and 90 percent Turkmen.

41. Nearly 6 percent of the population of the above villages migrates to urban areas (mainly Lattakia), while about 2 percent migrate to Lebanon as workers. Major reasons reported for out-migration include small size of land holdings, land fragmentation, population pressures and low income levels.

⁵² Mouterde, P. 1966, 1970, 1983. *Nouvelle Flore du Liban et de Syrie*. Tome I, II, III. Dar el-Machreq, Beyrouth, Liban.

⁵³ UNEP/MLAE, 2000; Baumgart, 1995.

42. There are several population centers nearby the protected area, including the town of Kassab (6 km from the site), the village of Qastal Mouaf (5 Km west), and the town of Rabeeha (8 Km to the southeast). The main urban center connected with the site is the city of Lattakia (50 Km). No nomadic groups or transhumants are present in the site area.

43. Major socio-economic activities at the site include the following:

- Agriculture: The above villages rely mainly on agriculture for their incomes. Cultivation of wheat and barley, and raising of fruit trees (particularly apples) are important.
- Livestock-raising: Surrounding villages maintain some 1,000 head of livestock, including goats, cattle and sheep. Bee-keeping is also widely practiced.
- Hunting: It is estimated that 150 wild pigs were hunted annually on average during the 1990s. Currently, some pig poaching continues to take place.
- Tourism: While accurate figures are not available, several thousand visitors annually come to the site (see below, under "Ongoing Threats.") However, local people do not at present benefit significantly from this visitation.

44. Ongoing threats and baseline scenario: The following are the main threats facing globally significant biodiversity at the site:

- *Fire*: Brutia pine forests are vulnerable to fires due to the effects of drought and human activities. The outermost southern and western borders of the protected area have experienced several fires. In 1989 around 150 ha of forest lands on the western slope of the Qwameeh mountain (western border) was burned. The same year, a large fire (400 ha) broke out on Al kabier mounta in.⁵⁴ The majority of fires take place in the summer and fall. Fire used to be set for land acquisition. However, after forestlands were demarcated and the forest law was revised, more fires seem to be set unintentionally as a result of burning crop residues. Some deliberate forest fires have also taken place due to animosity between residents and government officials.
- *Tourism*: As a unique forest type in a dry country, Fronloq attracts tourists from all over the country. Tourism activities take place in an unorganized, haphazard way, and pose a significant threat to the protected area. In summer, as many as 1,000 tourists per day may enter the area. The main affected spots are areas along the main road crossing the site. Unplanned and unorganized tourism, together with unrestricted movement of people in the area and an absence of sanitary facilities, make the protected area prone to various kinds of threats. People wandering outside trails cause soil compaction and destroys herbaceous vegetation. Water pollution of streams and springs is also possible. Most importantly, the irresponsible behavior of individuals may cause forest fires, thus jeopardizing the whole forest and its components.
- *Encroachment and land conversion*: Currently, forest clearing is not widely practiced. However, vegetation clearing along the peripheries of agricultural tracts is obvious. People clear vegetation to lessen the effects of shadowing and competition of forest trees with agricultural crops. It should be noted that this phenomenon is localized and practiced on a small scale. Patrols by forest rangers help limit this problem.
- *Roads*: The site contains several openings and roads. The roads function as fire lines (fire breaks). The site had no paved roads at all until 1942 when the Kassab-Lattakia road (western border) was paved. In 1970, the Fronloq-Al-Rabeeha road was paved too. The northern border road was paved

⁵⁴ Abido, M. (2000). *Forest Ecology*. (In Arabic). Damascus University publication. Damascus, Syria; Nahal 1982.

in 1988. It should be noted that roads in general affect biodiversity by fragmenting habitats, creating edge effects and through road kills of fauna. Within the site, several unpaved roads have been opened within the last ten years, partly to function as firebreaks. Of course, these roads also increase human access to the core area, with resulting negative impacts on biodiversity.

II. JEBEL ABDUL AZIZ (49,000 HA.)

45. Physical and biological overview: Jebel Abdul Aziz mountain lies in the northeastern corner of Syria (see **Annex E, Map 2**). The site is located within Al-Hasakeh province about 35 km from the provincial capital. The mountain covers 84,050 hectares and has a roughly rectangular shape approximately 85km long and 8-15 km wide. The area is composed of a series of hills and wadis with elevations ranging from 400 to 920 m. The north side is rather steep, and is more heavily eroded than the southern side. There is a plateau in its central part.

46. The climate of Jebel Abdul Aziz is arid Mediterranean of cool variant with a continental dominance. Annual rainfall ranges from 250-300 mm/yr with an average of 279 mm. Extreme cold and frost are quite common. Great daily and seasonal differences in temperature exist in the site.

47. Jebel Abdul Aziz supports remnant forest/steppe associations which represent the nearest living examples to Neolithic sites along the Euphrates some 160 kms to the west where these species were once common. The ecosystem of the site is composed of steppe vegetation with dominance of scattered woody elements. Trees form the upper story of the plant community while other herbaceous species form lower strata. A number of annuals are present too. Herbaceous vegetation grows mainly in springtime due to extreme high temperature in summer and extreme minimum temperature in the winter.

48. Key tree species of global importance include the following:

- *Pistacia khinjuk*: Although isolated populations of *Pistacia khinjuk* may remain in northern Iraq and southeast Turkey, Jebel Abdul Aziz supports a particularly well-conserved and viable population of the species.
- *Pistacia atlantica* is the dominant species in *Pistacietum atlanticae*, which is well developed only in the northern Syrian Desert, where a considerable and viable climax population exists. *P. atlantica* here has wider leaves which may represent a transitional form to *P. mutica*.

49. Some 200 additional floral species are found at the site, seven of which are endemic to Syria. These include *Allium karyateini* Post, *Astragalus chlorostegius* Boiss. et Hausskn., *Astragalus megaloceras* Sam., *Echinops descendens* Hand.-Mazz., *Onobrychis pinnata* (Bertol.) Hand.-Mazz., *Satureia pallaryi* Thieb., *Scutellaria cretacea* Boiss. et Hausskn.

50. The NPA's broader biodiversity significance includes the following aspects of economic importance:

- genetic resources of various fruit trees;
- protein-rich forage species that can be used for rehabilitation of degraded ecosystems elsewhere in Syria and the region;
- medicinal plants, which are present in important populations, and;
- ornamental species adapted to dry zones.

51. Finally, at least 25 species of mammals and 51 species of birds have been recorded at Jebel Abdul Aziz. These include globally threatened species such as the black vulture (*Aegypius monachus*), striped

hyaena (*Hyanea hyanea*), goitred gazelle (*Gazella sub-gutturosa*), Houbara bustard (*Chlamydotis undulate*) and little bustard (*Tetrax tetrax*). These species have been substantially reduced in number.

52. Site management and policy: MAAR's Decision No. 20 of 1993 declared 4,220 ha of the site as an NPA where a viable population of *Pistacia* species is to be found. On 15 November 2002, in the context of the PDF-B preparatory process, the declared area of the NPA was increased over ten-fold to 49,000 ha.⁵⁵

53. The Forestry Department manages the site through its forestry office in Hasakeh. Around 95% of Hasakeh office forest activities are carried out in the mountain. Current site management activities include rehabilitation projects such as protection and reforestation of the main species of pistachios. Afforestation with pine trees is carried out on the periphery of the core area. The site is patrolled to prevent unauthorized grazing. A number of forest guards, some of whom are motorized, are constantly present at the site. A total of approximately 400 workers are employed in nursery, afforestation, patrolling and silvicultural activities on the mountain.

54. Socio-economic context: The estimated total population living in the site area of Jebel Abdul Aziz varies from 12-14,000 depending on the status of the Bedouin migration, which itself is dictated by the latter's need for pasture, rangeland and water, and social and economic circumstances. The mountain and its surroundings host 50 villages, of which 20 are located on the mountain itself. The total population of these villages is estimated at 7,460. Average family size in the mountain area is estimated at 10 persons.

55. The majority of Bedouin families settling in the site belong to the "Bakkara Tribe." This tribe has been living in the mountain area for more than 400 years, and it is distributed in 18 villages within the protected area. Other groups known "Bani Sabaa" belong to the Taye Tribe and are settled in Om Talil village (100 people), and some households belonging to the "Noaem Tribe" are settled in Al-Sayed Hassan village (120 people).

56. The nearest urban center is the city of Hasakeh with a total population of 100,000 people. Tal Tamer town is the other nearby major population center located about 22 Km from the mountain, with a total population of 40,000 people working mainly in agriculture.

57. About 40 percent of the total labor force in the mountain area is involved in livestock production, 20 percent in agriculture production and 20 percent in off-farm activities. Males from 10 to 15 years of age are mainly involved in shepherding, while those between 15 and 55 work in both agriculture and sheep-raising. Women constitute about 60 percent of on-farm labor. It is estimated that the average working period varies between 6 and 9 months per year for men and 8.5 to 11 months for women.

58. Off-farm work includes agricultural and non-agricultural activities. Forestry officials estimate that about 60 percent of the families have had off-farm activities in the last four years to support their incomes. Of that percentage, 50 percent worked only on agricultural activities, while 10 percent had both agricultural and non-agricultural activities (government employment). Off-farm agricultural activities differ between genders. Women work seasonally in cotton planting and harvesting. Men work mainly in agricultural machinery services in the Khabour River district and its surrounding villages (north of the mountain area).

59. The afforestation project launched by MAAR in 1988 created significant job opportunities in the project area where nearly 400 local workers were employed. Consequently, the rate of unemployment has

⁵⁵ MAAR Decision 27/t of 15 November 2002.

declined recently to 30 percent. Out of the unemployed people, 70 percent are women and 30 percent are men.

60. MAAR's Law No. 20 has prohibited woodcutting in the mountain site area since 1993. However, women who participate in the silvicultural program are allowed to collect pruning operation residues. Collection of dead and broken branches is permitted for fuel wood uses. Grazing sheep in the reserve area is only allowed in locations where trees are more than ten years of age; grazing by goats is prohibited.

61. Women mainly collect medicinal herbs on the mountain from April through June. Collected materials are consumed in the form of tea and spices and are used for medical purposes. It is estimated that about 10 percent of the population of each village is involved in medicinal herb collection. The estimated average income generated from marketing the medicinal herbs in Al-Hasakeh city is about 60-70 SP/day (2000 SP/month). Truffles are harvested in certain years during March and April.

62. *Pistacia atlantica* and *P. khinjuk* seeds are collected during October and November. Other potential uses of *Pistacia atlantica* seeds include the extraction of oil and the extraction of gums from the terebinth. An individual can collect between 15-20 Kg/yr of pistachio seeds. It is estimated that the total production of seeds in the mountain may reach up to 10,000 Kg in good fruiting years.

63. Ongoing threats and baseline scenario: The following factors would continue to threaten globally significant and other biodiversity at the site under the baseline scenario:

- *Overgrazing*: People in and around the protected area depend principally on sheep and goat raising and consequently on mountain resources of trees and rangeland for their sustenance. Over the years, this dependence has been relatively well regulated through a customary management system (Hema), which is nowadays considerably weakened. High grazing pressure, unless properly managed, is an important threatening factor that reduces the natural regeneration of species. The leaves of the species are used as fodder for sheep and goats as supplementary feed in dry season. The land tenure policy and management of rangelands in the site tends to follow ad-hoc strict protection measures, and ignore the importance of viable customary natural resource management systems. This is a vital factor in land degradation. In wet years, the cultivation of grazing land for crop production and expanding sheep population leads to increasing pressure on the site as well as constraining livestock production.
- *Hunting*: Hunting appears to be a relatively minor problem in the area and can easily be controlled since hunters are basically outsiders. However, many individuals are said to come for hunting at the area during certain seasons in spite of its being officially prohibited.
- *Tourism*: Local tourism is minimal in the protected area. However, major recreation sites are down in the plains and particularly nearby the deer fenced area and afforestation sites where people can stay underneath canopies of trees. Forest fires in the plantations and littering are always a problem. Other effects of unregulated tourism include soil compaction and damage to trees.
- *Encroachment and land conversion*: Currently, no land encroachment or conversion is taking place. However, this danger is ever present due to poverty.

III. ABOU-QUBIES (C. 5,000 HA.)

64. Physical and biological overview: The Abou-Qubies protected area is located at the top and eastern slopes of the coastal mountain ridges. The hills and agricultural lands of Abou-Qubies and Hir Al-Musiel bound the site to the east, while in the west the site is bordered by the agricultural lands of Khirbet Al-Sindyane and Btamoush (see **Annex E, Map 3**). The coastal mountains in general have a sub-humid to

humid Mediterranean climate with cool to cold variant. The elevation of the site ranges from 540 to nearly 1200m above mean sea level, with elevation decreasing gradually from north to south.

65. The site ecosystem is composed of a mixture of evergreen sclerophyllous forests and deciduous forests. These may be characterized as follows:

- *Evergreen forests:* Basic components of the evergreen forests are *Quercus calliprinos* (umbrella species), along with various secondary woody species such as *Q. infectoria*, *Arbutus andrachne*, *Pistacia palaestina*, *Phillyrea media*, *Laurus nobilis*, *Cotinus coggyra*, etc. These forests form a climax community more than 4m in height. They are found on shallow soils and drier sites, mainly on southern and eastern slopes. Once disturbed (grazing, cutting, clearing, etc.), retrogression succession starts and leads to secondary plant communities. These secondary communities are composed of so-called 'maqui' of different degraded stages.
- *Deciduous forests:* Deciduous forests of the site are concentrated on deep soils/rock fissures at elevations greater than 850m on northern and western slopes where moisture supports lush vegetation growth. Basic woody components of these forests include *Quercus cerris* subsp. *pseudocerris*, *Q. infectoria*, *Ostrya carpinifolia*, *Sorbus* sp., *Pyrus Syriaca* and many others. Evergreen elements are 40% or less by percentage.

66. The protected area contains various elements of Mediterranean flora and some Irano-Turanian elements. Few species occur of the hot variant of Mediterranean bio-climate zones, and most of these are threatened. *Ceratonia siliqua*, *Olea europea* and *Myrtus communis* are major representatives of this category. Species found in the Eu-Mediterranean zone are: *Pistacia palaestina* (= *P. Mutica*), *Quercus calliprinos*, *Laurus nobilis*, *Spartium junceum*, *Acer syriacum* and *Juniperus oxycedrus*.

67. Major tree species found in the mountain bio-climatic zone of the site are: *Quercus calliprinos*, *Carpinus orientalis*, *Fraxinus ornus*, *Q. pseudocerris*. Natural and man-made Brutia pine stands are also present in the site.

68. The importance of Abou Qubies protected area comes from its geological, geo-morphological and biological structures. The ecosystem in the area is considered unique in its assemblages of species, which create habitats sheltering various forms of fauna. Due to its micro-climatic conditions and favorable climate, the site is rich in species. The number of flora species in the protected area is estimated at 350 with perhaps six endemic species. The site may support as many as 25 rare or endangered species, though these figures are somewhat uncertain (see **Annex H**).

69. Important resident bird species recorded at the site include: Syrian serin (*Serinus syriacus*), black vulture (*Aegypius monachus*), Hamerkop (*Scopus umbretta*), black francolin (*Francolinus francolinus*), golden eagle (*Aquila chrysaetos*), lesser kestrel (*Falco naumanni*) and Hoopoe (*Upupa epos*). Recorded mammals, some of which have rarely been seen in recent years, include the red fox (*Vulpes vulpes syriacus*), wild cat (*Felis catus*), wild boar (*Sus scrofa*), and striped hyaena (*Hyaena hyaena*).

70. Site management and policy: Abou-Qubies was declared a forest protected area by MAAR Ministerial decision 17/T of 18 May 1999. The initial total area targeted by this decision was 11,000 ha. However, the national team survey concluded that the area actually designated is only 5,000 ha. The previous decision did not specify the type of the protected area. However, it clearly banned all activities including trespassing over the site and imposed heavy penalties for violations.

71. MAAR's central forestry bureau manages the site through its forestry office in Al-Ghab province. In addition, the site's northwestern and southwestern borders are administered and monitored by Lattakia

Office of Forestry. There are no fire towers in the protected area; however, the site is monitored from outside fire towers and through on-foot patrolling. There is one forest ranger station (Tamazeh forest ranger station) near the northern border as well as a central forest fire station nearby servicing all the forests of Al-Ghab. A number of forest guards, some of whom are motorized, are on daily duty at the site. No management practices are currently carried out at the site except patrolling.

72. Socio-economic context: The total population living in and around the site is estimated at 5,100. These are divided amongst nine villages: three are entirely located within the site boundaries, three border the site and three are located on the periphery, yet outside of the site. In addition, there are six towns located within fifteen kilometers or so of the site, with a combined population of some 45,000 people. Finally, three main urban centers – Hama, Tartous and Lattakia – are all found within 55-85 kilometers distance.

73. Nearly 50-60 percent of the households living in the above nine villages have benefited from land reform in the nearby Ghab plain. Therefore, seasonal migration takes place from all of the villages to the Ghab plain where wheat, barley, cotton, sugar beets and maize are grown. About 10 percent of the population of each village appears to migrate to urban centers, mainly Damascus, compared to about 7 percent who migrate to Lebanon as workers. Major reasons reported for out-migration include small size of land holdings, land fragmentation and its remoteness, population increases and low incomes.

74. Nearly 95 percent of the total labor force in the site area are involved in on-farm activities, of which 80 percent are working in plant production mainly horticulture, and 20 percent in livestock husbandry, mainly goat raising. Boys mainly herd goats, and in a few cases the families hire labor for shepherding the flocks.

75. Households generate their incomes from on-farm (70%) and off farm activities (30%). Horticulture production generates the highest contribution of on-farm income, which accounts for 65 percent compared to about 5 percent from cereal production and about 30 percent from livestock production. The estimated annual average income ranges from 75-100,000 Syrian Pounds. Five percent of the total labor force is involved in off-farm activities, e.g., forest guards, rangers, drivers, forestry fireman, etc.

76. Off-farm income generates about 30 percent of the total family income. Off-farm work include agricultural and non-agricultural activities. Government employees generate an average annual income of 36,000 SP, while landless workers generate about 40,000 SP per year to support their families. Unemployment rate is 30 percent and is considered relatively high in the site, out of which 10 percent for men and 20 percent for women.

77. Ongoing threats and baseline scenario: These include the following:

- *Overgrazing*: People in the protected area depend principally on goat raising and consequently on forest resources for their sustenance. Forest tracts are used primarily as rangelands and as a source of fuelwood. Goat grazing is considered a serious threat to the protected area since goats are raised with uncontrolled grazing practices. In addition, fodder species are cut and hauled out of the area to feed yard-raised sheep and cows. Overgrazing threatens various plant communities, especially medicinal herbs and fodder species.
- *Woodcutting and charcoal making*: Woodcutting and charcoal making is second to grazing as a threat. Selective woodcutting of certain species – mainly oaks – destroys niches and habitats for lower strata and disturbs the ecological balance within soil micro-flora. The site has not yet been affected on a large scale by these activities; however, they remain a risk for the future unless existing laws are enforced and alternatives are found. Charcoal making is popular and represents an important main or supplemental source of income.

- *Hunting*: Illegal hunting (e.g., illicit baby deer collecting) is widely practiced in the area. Quills, wild pigs and other carnivores like wolves are illicitly hunted.
- *Fire*: Wildfires and use of fire to burn agricultural residues at the end of summer is causing considerable loss of biodiversity and destruction of forest ecosystems.
- *Encroachment and land conversion*: The area has a rough topography with extensive rock outcrops and shallow soils. This in turn make water scarce (despite heavy rainfall and snow) and people have to depend on some type of water collecting system so they can use it domestically and for watering their livestock and tobacco fields. Agricultural tracts are found basically on dolines and in depressions where water is stored in relatively deep soil profiles. These spots have been farmed and utilized in cereal production (mainly wheat) for hundreds of years. Some of them are currently abandoned for economic reasons. Abandoned areas were invaded once again with natural vegetation. Apparently there are no new land encroachments since forest demarcation was done a few years ago. However, one cannot rule out forest clearings in the vicinity of villages and on the peripheries of agricultural lands.

B. Overview assessment

78. The following matrix summarizes the main threats facing the project sites, together with an indication of the degree of severity:

Table 2: Threats summary

Nature of threat	Site	Al Fronloq	Jebel Abdul Aziz	Abu Qbais
Fire		***		
Unplanned tourism		***	*	
Hunting			*	***
Encroachment / land conversion		*	*	**
Woodcutting and charcoal making				**
Overgrazing			***	***
Roads		***		

Note - * indicates the degree of severity, with three stars *** being the most severe. No * indicates the threat is not present in any significant way at the site.

79. A problem tree presented in **Annex F** provides a generalized picture of the threats and causes relationships facing biodiversity within and around protected areas in Syria. Taken as a whole, the circumstances at the project sites exemplify an overall baseline situation wherein Syria’s globally and nationally significant biodiversity is not being adequately conserved through a well-functioning system of protected areas. A wide range of direct threats – including hunting, forest fires, overgrazing, poorly conceived afforestation programs, unplanned tourism, uncontrolled removal of firewood, uncontrolled harvesting of medicinal plants and misuse of agro-chemicals – are continuing to have a substantial impact on areas which are only nominally ‘protected.’ The underlying causes of these threats, and associated barriers, have been grouped into the following categories:

- *Existing policy, legal and institutional structures, particularly those related to protected areas management, do not generate effective support for biodiversity conservation or sustainable use management.* MAAR management policy for PAs has been based directly on its responsibilities arising out of the 1994 Forestry Law as well as guidance and funding provided through Syria’s Higher Council on Afforestation. However, the Law was not written, and the Council did not

operate, in a manner that took biodiversity considerations into account. Evidence of this is found in various actions undertaken in the PAs, such as excessive road construction and mono-cultural afforestation, as well as in the near total absence of other, potentially beneficial types of actions, such as the preparation of management plans, environmental monitoring, etc. Indeed, the focus of the approach seems largely to have been on planting trees, with the broader ecosystem given scant attention. This failure seems due in large part to very limited awareness and capacities within Syria for dealing with biodiversity conservation issues, particularly in 1994 when the Forestry Law was drafted. A second set of causes has to do with inter-ministerial competition for authority and resources between MAAR and MLAE. Thus, MLAE, with its biodiversity concerns, has rightly or wrongly been perceived as trying to wrest responsibility for MPAs away from MAAR. MAAR's reaction has been to try to push MLAE away, yet without taking on board the concepts being promoted by MLAE. Indeed, development of a constructive relationship between these two ministries in the area of PA management has been a key challenge of the PDF-B phase and one for which a good deal of progress may be reported.

- *Protected area management systems at individual PAs are poorly structured. PA managers have limited capacity to plan and implement systems and actions based on principles of sustainable use or biodiversity conservation, including those related to the concerns and priorities of local people:* The actual degree of protection at existing PAs is not high, nor has biodiversity conservation been an explicit or recognized management goal. None of the sites have well developed set of systems, structures, policies, legal status or actions to support biodiversity conservation and protected area management. Management efforts at the nature reserves have been administered by MAAR's Forest and Afforestation Directorate and have consisted mainly of afforestation programs. These involve mono-specific plantation of *Pinus halepensis*, *Pinus pineae*, and various varieties of almonds, olives and oaks, with little or no consideration given to biodiversity conservation. MAAR has over 3,000 permanent staff members who are posted mostly in the Governorates. However, none of these staff has had the minimum training or experience in PA management or biodiversity conservation.
- *Local people living in and around PAs have few alternatives to unsustainable resource use and an adversarial relationship with PA managers:* Surveys conducted by a team of national consultants working during the PDF-B stage made frequent contact with local people living within and immediately surrounding the three demonstration sites. The findings of these surveys indicated varying levels of tension – from moderate to severe – between forest department personnel and local villagers. Villagers in general did not feel themselves to have been adequately consulted or involved in decisions related to resources that in some cases they had enjoyed access to for generations. Thus, Syria lacks good examples of sustainable alternatives supporting the livelihoods of people and communities living within, or in the buffer zone of, protected areas. Under the baseline scenario, gradual improvement might have been expected in these relationships, as communities became accustomed to recently enacted restrictions on access to resources, although increasing population pressures in project site areas would have partially mitigated these positive impacts.

ALTERNATIVE COURSE OF ACTION

80. Project strategy: The **development objective**, to which this project contributes, is to ensure that Syria's globally and nationally significant biodiversity is sustainably used by, and provides benefits to, its current generation while being conserved for the benefit of present and future generations worldwide.

81. The **project objective**, which the project is committed to achieving fully, is to demonstrate practical methods of protected area management that effectively conserve biodiversity and protect the interests of

local communities, while supporting the consolidation of an enabling environment that will facilitate replication and effective PA management throughout the country.

82. In order to achieve the above objective, the project will produce three closely related outcomes, which are described below, together with the Activity Areas (AAs), which constitute them. The overall strategy of these outcomes, or the project's basic integrating logic, may be summarized as follows:

- i. With co-ordinating support from MAAR's Department of Biodiversity and Protected Area Management (MAAR-DBPAM), monitoring from MLAE's Directorate of Biodiversity and Protected Areas (MLAE-DBPA) (capacities of both units strengthened under Outcome 1), and direct implementation support from provincial and local Forestry Department units (capacities strengthened under Outcome 2), PA management techniques will be developed and implemented at three demonstration sites (Outcome 2). The development of broader national-level processes (Outcome 1) will move in parallel to, while being informed by, this site-specific work.
- ii. With co-financing from UNDP, co-ordinating support from MAAR-DBPAM and direct implementation support from provincial and local units of the Forestry Department, model approaches to alternative sustainable livelihoods and community resource management will be developed and implemented (Outcome 3).
- iii. Methodologies and processes developed and tested at the three demonstration sites (Outcomes 2 & 3) will be assessed and lessons learned will be derived (Outcome 1). These will feed back into and help to refine the operating procedures of the relevant central and regional-level co-ordinating and operational units. This process will facilitate the replication of site-based results by helping to rationalize the basic PA-related administrative and managerial processes followed by governmental units responsible for PA management throughout the country.

83. Outcome 1 - Policies and institutional systems allow for the wise selection and effective operation of protected areas to conserve globally significant biodiversity (GEF - \$1.6 million; Others - \$0.5 million): The baseline assessment presented in the previous section has demonstrated that Syria has yet to develop a well-functioning and integrated system for PA management. Activities grouped under this outcome are designed to facilitate the creation of such a system. The capacities of two key institutional actors, MAAR and MLAE, to implement existing and possibly new PA-related functional responsibilities under Syrian law will be substantially increased. Importantly, specific and detailed processes of inter-sectoral co-operation will be developed in an area which heretofore has served mainly as a source of inter-sectoral conflict. These processes will range across all phases of the PA management process, from identification and selection of PAs to management and monitoring. Finally, capacities will be strengthened to ensure linkages between the PA management system and processes of biodiversity management in the broader landscape, thus ensuring that PAs not only function well individually, but also contribute to national-level objectives for biodiversity conservation.

84. A key underlying objective of Outcome 1 is to facilitate the extension of support to, and/or oversight of, individual PAs throughout Syria. It is after all at site level that tangible biodiversity benefits will accrue. Thus, this outcome will remain closely linked to Outcomes 2 and 3, which will operate at the level of demonstration sites.

85. Activity areas designed to achieve the above outcome include the following:

AA-1.1: INSTITUTIONAL CAPACITY BUILDING FOR PA MANAGEMENT: Within the context of the PDF-B, Government has taken important steps towards establishing and consolidating national-level units for PA management and biodiversity conservation. These include MAAR's newly created Department of Biodiversity and Protected Area Management (MAAR-DBPAM) and MLAE's Directorate of Biodiversity and Protected Areas (MLAE-DBPA). GEF institutional support will

complement ongoing Government efforts to ensure the effective functioning of these units. This AA will ensure the rationalization of unit job descriptions within and between the key ministries, ensuring a minimum of either overlaps or gaps among the different units. This process will also involve reviewing the relationships and lines of authority within each ministry, e.g., between MAAR-DBPAM and the provincial-level forestry offices and between MLAE-DBPA and its provincial offices. The goal is a set of streamlined, yet effective, national institutional arrangements for PA management. Once agreed, these arrangements should be codified formally, for example in a Memorandum of Understanding among relevant agencies or perhaps another formal policy agreement on institutional set-up. Operational processes such as planning and financial management will be supported through mechanisms such as training (see AA-1.2), support from national and international experts and provision of necessary equipment.

AA-1.2: HUMAN RESOURCE DEVELOPMENT: A critical barrier identified during the PDF-B process is the limited knowledge and skills related to biodiversity among managers and officials within national-level institutions responsible for PA management. This is a particularly urgent issue within MAAR which, despite having responsibility for managing numerous PAs, has few personnel with even limited training in biodiversity conservation. This AA will remove this barrier beginning with an effort to improve job descriptions and job profiling for staff positions within these units—the units themselves having already had their responsibilities clarified under AA-1.1. This step will include the development and implementation of a training programme to upgrade biodiversity- and PA-management skills among relevant staff. Together, Activity Areas 1.1 and 1.2 will ensure that required tasks for PA management at national level are properly allocated, first among relevant agencies and units, and second among individual, qualified professional and support staff, who in turn will have received the necessary skills upgrading needed to accomplish their tasks.

AA-1.3 SUPPORT FOR CARRYING OUT PA-RELATED CO-ORDINATION RESPONSIBILITIES—MAAR: This AA involves the provision of technical support to agreed PA-related co-ordination responsibilities of MAAR. Pilot implementation within many of the identified areas will be undertaken at the project's demonstration sites (see Outcomes 2 & 3 below). Specific responsibilities and tasks are expected to include the following:

- i. Data and information: Develop and implement methodologies and guidelines for baseline biodiversity information gathering, assessments and ongoing monitoring / inspection of PAs, including monitoring of socio-economic aspects.
- ii. Investment planning: Improve capacities for investment planning related to PAs.
- iii. New PA identification/management to enhance PA coverage in Syria: Develop mechanisms for replicating project success at new PAs and extend protected area coverage by identifying and prioritizing potential new protected areas. These will require a high level of awareness and advocacy for PAs, and will include ecological surveys and social impact assessments to be undertaken prior to PA establishment.
- iv. Development of alternatives to mono-species afforestation: The Forestry Department has recognized the problems created by earlier afforestation programs. This activity will focus on developing more biodiversity-friendly remediation efforts and will include development and dissemination of a training manual on afforestation.
- v. Development of new propagation techniques: The will include extension of techniques for threatened plant species not commonly propagated in the past.
- vi. Wildlife conservation and management: Develop and implement mechanisms to ensure that national-level wildlife conservation objectives are incorporated into site management planning.
- vii. Flora conservation: Develop and implement national-level and site-specific strategies for conservation and regeneration of rare and threatened forest and rangelands species.

- viii. Reporting: Standardize reporting by provincial-level Forest Departments concerning PAs within their jurisdiction. Prepare and disseminate a single Annual Report covering MAAR-operated PAs.

AA-1.4 SUPPORT FOR CARRYING OUT PA-RELATED CO-ORDINATION RESPONSIBILITIES—MLAE: Syria's network of protected areas can and should play an integral part in a 'bio-regional approach' to biodiversity management. Such an approach would consider factors such as the role and adequacy of existing PAs in achieving national-level conservation objectives, the importance of corridors between PAs and the need for conservation actions within the broader landscape. A macro-level overview of this type is within the mandate of MLAE and increasing capacities in this area will form an element of the co-operation taking place under this AA, which involves the provision of technical support to agreed PA-related co-ordination responsibilities of MLAE. Pilot implementation within many of the areas identified will be undertaken at the project's demonstration sites (see Outcome 2 below). Specific responsibilities and tasks are expected to include the following:

- i. Inter-sectoral co-ordination: Strengthen implementation of all legally mandated inter-sectoral co-ordination responsibilities related to PAs. These will include, *inter alia*, co-ordination of national-level process of PA identification and selection.
- ii. Monitoring / Data and information management: Ensure that data and information flows from MAAR-managed and other PAs flow into a centralized data management system capable of monitoring biodiversity change within both PAs and the broader landscape, particularly within corridors between PAs. These should include both ecological information as well as information on threats and threat reduction, particularly at demonstration sites.
- iii. Policy & programme analysis: Based on information and data collected at PA and landscape levels, produce periodic assessments of the efficacy of the national system for PA management and proposals for its improvement. These will constitute lessons learned, beginning with experience at demonstration sites.
- iv. Environmental impact assessment: Assess the existing system for Environmental Impact Assessment (EIA) as it relates to PAs and propose necessary revisions.
- v. New PA identification: Develop rules and requirements for establishing and monitoring PAs, including financial and budgetary, ecological assessments (studies) as a tool for prioritization, (re)-definition of objective process for identifying, nominating and approving, social impact assessment prior to establishment.
- vi. Public awareness: Raise public awareness concerning the role of protected areas in biodiversity conservation in Syria. This should include preparation and wide dissemination of awareness materials including brochures, posters, a 'user-friendly' annual report, etc.

86. Outcome 2 – Effective techniques for PA management and biodiversity conservation have been demonstrated and are available for replication (GEF - \$1.6 million; Others - \$1.6 million): Activities being planned under Outcome 2 will complement Outcome 1 efforts by directly addressing site-level management practices at the three project demonstration sites. Outcome 2 will provide an on-the-ground demonstration of the PA system's functioning at these three critical sites and in so doing will create practical models of PA management and operations. This will include the introduction of common PA management techniques such as zoning, management planning, community relations, etc. It will also involve a restructuring of planned baseline activities, e.g., afforestation, to better reflect biodiversity conservation objectives.

87. Outcome 2 will be important both for the tangible conservation benefits that it provides at the three sites as well as for the demonstration effects for the overall PA system. Careful ecological and process monitoring, followed by programme analysis and awareness-raising (see Outcome 1), will ensure that the benefits of more effective management at the sites are identified and disseminated.

88. Activity areas designed to achieve the above outcome include the following:

6.1.1.2 AA 2.1 - TRAINING OF LOCAL CADRES AND MANAGERS IN ECOSYSTEM PLANNING AND MANAGEMENT: The baseline assessment has pointed to an important barrier in the form of provincial and local-level staff and managers with little if any knowledge of ecosystem-based planning and management. Thus, like Outcome 1, Outcome 2 will begin with training and human resource development. Target groups for training among MAAR's more than 3,000 employees will include provincial- and district-level managers and staff responsible for demonstration PAs. These will include key staff within Forestry Department offices in Al-Hasakeh (for Jebel Abdul Aziz), in Lattakia and at sub-district offices in Qastal Mouaf and Al-Rabeeha (for Al-Fronloq), and in Al-Ghab (for Abou-Qubies). Training will include site-based team-building exercises covering a broad range of staff as well as across-site modules appropriate for different classifications of staff (forest rangers, supervisors, etc.). In addition to ecosystem management, staff will receive training in such areas as management planning, data collection / management and approaches to community relations and outreach.

6.1.1.3 AA 2.2 - IMPLEMENT BIODIVERSITY MONITORING PROGRAMMES: Monitoring of biodiversity and of natural resources in general is an important – yet thus far largely ignored within the Syrian context – component of PA management. This AA will build on work undertaken during the PDF-B in order to produce baseline assessments of floral and faunal diversity and abundance, along with a follow-up monitoring programme. Site-based officials will work closely with MAAR/DBPAM staff to tailor general monitoring guidelines (see AA 1.3.i) to the specific needs of each site. The monitoring programmes will have the following objectives:

- i. providing managers with an improved, geo-referenced picture of biologically critical, or core, areas within each of the PAs, which will become a necessary element for zoning arrangements (see 2.3 below).
- ii. providing a useful baseline from which subsequent ecological changes can be monitored.
- iii. linking into a national-level database and GIS system for consolidating site-specific data and providing feedback to site managers (see AA 1.3.i).
- iv. providing a more detailed sense of the intensity and location of threats facing biodiversity within the PAs, which will be essential for formulating threat-reduction strategies to be incorporated into the site management plans (see AA 2.3) and strategies for community outreach (see Outcome 3).

6.1.1.4 AA 2.3- DEVELOP SITE MANAGEMENT PLANS: In addition to strengthened human resources and enhanced data and information flows, improved management at demonstration sites will require effective systems for integrated management planning. Site managers, with support from Damascus-based experts, need to develop medium-term plans for their sites, encompassing biodiversity conservation and remediation goals, and practical strategies for achieving these. This process will begin with a review and assessment of current management practices and planning at project sites, including policies of restoration using heavy vehicles, afforestation, etc., to assess the suitability and impacts on biodiversity of these measures. This will be followed by development of 5-year management plans for each site, to include issues such as threat removal, sustainable use protocols, development of functional

zoning schemes, revisions to job profiles and management structures, proposals for pilot ecological rehabilitation measures and investment plans. It will be important to ensure the consultation and participation of a broad range of stakeholders within this planning process.

6.1.1.5 AA 2.4- IMPLEMENTATION OF SITE MANAGEMENT PLANS: Under this AA, concrete measures will be taken for the mitigation and where possible removal, of remaining threats to biodiversity, all based on an agreed management plan (see AA 2.3), as well as the further strengthening of PA management capacities.

89. Outcome 3 - Sustainable use of natural resources in and around protected areas has been demonstrated (GEF-\$0.10 million; Others-\$1.3 million): The baseline assessment has identified various local communities living in and around protected areas as a key target group for the project. Their proximity to the PAs (indeed, two of the demonstration sites have villages located as 'islands' within their boundaries) is one reason for their significance. Their intimate knowledge of the forests, where they have grazed herds, collected forest products and hunted, sometimes for generations, is another. Both of these factors have frequently brought local people into conflict with local Forest Department officials in the past. The goal of the present planned outcome is a transformation of the role of local communities from sources of threat to partners in conservation.

90. Activity areas designed to achieve the above outcome are as follows:

AA 3.1- ASSESSMENT OF LOCAL COMMUNITY RELATIONSHIPS WITH DEMONSTRATION SITES AND SITE RESOURCES: Work undertaken during the PDF-B phase has helped to increase knowledge concerning local community – PA interactions. Legal and illegal uses such hunting, grazing, wood collecting, etc., have been preliminarily assessed. Under the present full project, a comprehensive, participatory socio-economic assessment will be made of each site area. This will include assessing the extent and nature of local community dependence on site resources, both directly (fuel, water, food, medicinal or income-generating resources) and indirectly (existence values, environmental values including watershed and soil stability, etc.). These assessments will also seek to quantify and prioritize various anthropogenic threats to the sites, e.g., grazing, agriculture and agrochemical use, hunting, wood-chopping, charcoal-making, etc. They will also estimate the extent to which these anthropogenic threats affect biodiversity in, and sustainable use of, the sites and the degree to which these threats need to be reduced or eliminated to achieve sustainability. Finally, local knowledge of resources, e.g, medicinal plant properties, will be catalogued through these assessments.

6.1.1.6 AA 3.2- SITE MANAGEMENT PLANS AND OPERATIONAL ACTIONS ADDRESS THREATS ARISING FROM LOCAL COMMUNITY ACTIVITIES IN AND AROUND SITE AREAS: Information collected under AA 3.1 will subsequently be incorporated into site management information (GIS) systems and integrated management plans so that they may be treated as integral factors in the decision-making process. This AA, together with AA 3.1, will be co-ordinated and supported for all sites by MAAR-DBPAM (see AA 1.3.i).

AA 3.3- ALTERNATIVE LIVELIHOOD ACTIVITIES AND OPPORTUNITIES ARE IDENTIFIED AND MADE AVAILABLE TO LOCAL COMMUNITIES WHERE REQUIRED: This AA will be closely linked to the results and conclusions of AA 3.1. It will also build on proposals developed through a participatory consultation process undertaken during the PDF-B (see **Annex G**), which identified a number of possible sustainable and/or alternative livelihoods both within and outside of the traditional livestock/agricultural sector – e.g., techniques for sustainable use of

PA resources, handicrafts production, etc. During the full project, a series of briefings and discussions will be held with local communities to explain how their activities affect the sustainability of the sites, and the need to find alternative sustainable livelihood activities to substitute for existing unsustainable activities. Based on these discussions, potential alternative livelihood activities will be further identified/tuned. This process of identification should closely involve local communities, and identified alternatives should constitute acceptable substitutes for existing income and resource sources. Potential alternatives should be researched and pilot-tested to identify those sustainable livelihood activities that are most suitable for local socio-economic and ecological conditions. Finally, once suitable alternative livelihood activities have been identified and accepted by local communities, the AA will provide technical and financial support for the implementation of these alternatives in all affected communities. The latter will be supported through co-financing support from UNDP Syria.

91. End of project situation: At the end of this project, the following changes are expected:

- Local cadres are trained and qualified in sustainable planning and management of ecosystems to ensure conservation of significant biodiversity resources.
- Managers and decision-makers are provided with sufficient information on the natural systems at project sites to ensure informed decision-making and policy-setting.
- Management of project sites is being undertaken according to comprehensive, institutionalized management plans incorporating site zoning, institutional structures and proactive management of threats.
- Project sites are provided with improved infrastructure and facilities to ensure effective management.
- Biodiversity conservation and sustainable use priorities are incorporated into Government developmental planning and operational decision-making, through the review and improvement of existing legal and regulatory structures.
- Site managers at protected areas fully understand and take into account local community relationships with and dependence on the natural resources of the sites.
- Anthropogenic threats arising from local community resource use in site areas is fully understood and addressed in site management plans and operational guidelines.
- Anthropogenic threats to project sites are eliminated or reduced to sustainable levels through the provision of alternative livelihood resources and income-generating activities.

92. Project beneficiaries:

Key stakeholders who will benefit from the project directly or indirectly are:

6.1.1.7 Local communities and local-level village institutions:

- Local communities will be empowered to develop sustainable livelihood resources and resource use patterns that provide improved incomes and standards of living, while ensuring the sustainable management and long-term conservation of Protected Area resources in their areas.
- Nomadic tribes and communities will be assisted to develop sustainable fodder resources for their livestock herds, while reducing grazing impacts on the Protected Areas to sustainable levels.

- Women, youth and other minority voices in village communities will be empowered through training and capacity-building activities to develop and diversify income and livelihood sources, and to achieve a more participatory voice in village leadership and decision-making.

6.1.1.8 Government staff and agencies:

- Staff of DBPAM-MAAR and MLAE-DBPA will benefit from intensive training and capacity-building as well as improved resources to undertake sustainable management of Protected Areas according to prevailing global best-practices.
- Policy- and decision-makers will benefit from capacity-building, and from improvements to institutional and legislative structures which will facilitate more effective and efficient decision-making and policy-setting in pursuit of sustainable management goals.

6.1.1.9 The General Public, Scientific and other institutions:

- The general public will benefit from awareness-raising and public education activities, which will result in greater understanding of, and appreciation for, the importance of conserving biodiversity through PAs.
- Scientific and academic bodies will benefit from consulting and training opportunities, as well as enhanced exchanges with the global biodiversity conservation community.

93. Eligibility for GEF financing: The Government of Syria ratified the Convention on Biological Diversity on 10 December 1995 and notified the GEF of its participation in the restructured GEF. The project also fulfils the objectives of the Convention on Biological Diversity by supporting *in situ* conservation (Article 18), ensuring the equitable distribution of benefits derived from biodiversity management (Articles 10, 16 and 18), monitoring (Article 7), awareness raising (Article 13), and institutional reinforcement (Article 12).

94. The project is fully consistent with the provisions of Operational Programme 1, Arid and Semi-arid ecosystems. Its focus is on conservation and sustainable use of forest and dryland ecosystems. Major outputs include threat removal, sectoral integration, sustainable use and institutional strengthening. Activities undertaken by the project include many of those described as ‘typical’ by the OP. Finally, public involvement has been, and will continue to be, a hallmark of the approach taken by the project.

95. While the GEF is still in the process of defining its emerging directions in biodiversity under GEF-3, the project has been designed with the latest draft report on this subject in mind. In particular, the Strategic Priority I will be supported, by **Catalysing sustainability for protected areas**. The project may be described as having a dual purpose in this respect. First, it focuses on strengthening conservation at what have been determined to be the three most globally significant PAs in Syria. At this level, *local communities and community-based organizations* will play an important role in project implementation, as well as benefiting from the development of alternative sustainable livelihoods. Second, and perhaps more importantly, the project takes a programmatic approach to developing the long-term capacity and sustainability of the national PA system, with emphasis on institutional and individual capacities. This dual approach has been considered the most effective one under present circumstances.

96. Complementarity and co-ordination with other projects within the region: The present project has been designed to work in a complementary manner with other relevant GEF projects. Two projects in particular bear mentioning:

- The World Bank-GEF MSP project at Arz/El Shouh protected area near Slenfe (see also paras. 24-25 and 121) has demonstrated a clear challenge to be overcome related to institutional co-

ordination between MAAR and MLAE. However, in addition to learning from the problems faced by that project, it is important to work together with the project, which has recently been extended until 30 September 2004. Planned co-operation aimed at benefiting both projects will include direct exchange of information between the respective NPDs and planning for possible joint training exercises, etc.⁵⁶ In addition, each NPD should be given observer status on the other project's Project Steering Committee (PSC).

- UNDP-GEF's regional project for Conservation and Sustainable Use of Dryland Agro-Biodiversity of the Fertile Crescent was approved in October 1998. The project has promoted conservation of agro-biodiversity through increased use of wild fruit trees in reforestation, while providing a variety of training and public awareness-raising activities. Some work has also been done in the area of policy formulation. The present project has already begun co-ordination during the PDF-B phase, with the Agro-biodiversity project's CTA having participated in the PDF-B's Project Development Workshop. Ties between the projects will be re-invigorated early on through a mission by the National Project Director and National Project Managers to the Agro-biodiversity project's PCU.

97. In addition to the above GEF projects, the project will maintain contact with the UNDP/UNEP-supported Biodiversity Planning Support Programme for the Arab States and its database on biodiversity expertise in the Arab States region.

98. Link to UNDP CCF: The first Country Cooperation Framework (CCF) for Syria was approved by the Executive Board at its third regular session 1997 for four years from 1 January 1997 to 31 December 2000. UNDP is assisting the Government of Syria to meet its international commitments under the various international environmental conventions through technical assistance in the form of Enabling Activities. The UNDP office in Damascus also supports the Government of Syria's efforts to engineer the active participation of civil society in the design, execution, and evaluation of environmental programs. This project incorporates both aforementioned support elements, and UNDP will play a key role in brokering agreements between stakeholders, and ensuring that institutional agreements are honoured.

99. Implementation and execution arrangements: Project implementation will follow national execution arrangements and will be undertaken by the two main participating government ministries, MLAE and MAAR, with the support of a Project Co-ordination Unit (PCU) under the overall guidance-oversight of UNDP. Prior to the project inception mission, each ministry will appoint its National Project Manager (NPM), who will be responsible for co-ordinating the implementation of project activities within his/her Ministry. Each NPM will also be responsible to ensure effective co-ordination and co-operation with the counterpart NPM/Ministry, as well as with the PCU. It is preferable that the NPM either be the individual in charge of the main implementing unit within each Ministry (i.e., NBPAM and NBPA) or that individual's direct supervisor.

100. The PCU will be led by a National Project Director (NPD), who will be selected by a panel established for this purpose, with participation by MAAR, MLAE and UNDP Syria. Each party will have veto power within this panel, meaning that the NPD, to be selected, must have the support of both Ministries and UNDP. Once selected, the NPD, with the technical and contract-issuing support of UNDP,

⁵⁶ Training and capacity building under the UNDP-GEF project will build on and complement support being provided through the WB/GEF project. However, as a full-size project with a larger training component, it will provide greater depth and breadth of support than that being provided under the WB-GEF project. At local and provincial levels, training will benefit MLAE and MAAR officials who were not involved with the WB-GEF project, which did not work in their provinces. At national level, the UNDP-GEF project will further build capacity among officials who may have already received some support from WB-GEF. Careful co-ordination between the projects will ensure that there is no overlap in areas covered by the two projects' training components

will recruit PCU staff members, including a Deputy NPD (who should be someone of unquestioned technical abilities) along with two support staff.

101. Responsibilities of the PCU will include the following:⁵⁷

- to provide overall project co-ordination, while acting as an independent and unbiased guarantor of co-operation and information exchange between the ministries;
- to convene quarterly Project Implementation Meetings (PIMs), involving the NPMs, NBPAM and NBPA directors, together with PCU staff. These meetings will review progress in implementing project workplans and will attempt to resolve any ongoing difficulties in inter-ministerial co-operation;
- to ensure, together with the executing agency and UNDP, that specified tasks undertaken at the project sites are outsourced to suitable consultants and/or sub-contractors through competitive bidding processes. This would include, for example, development of bidding documents and terms of reference, in co-operation with MAAR and/or MLAE, as necessary;
- to organize project-level meetings and workshops, e.g., inception workshop, Project Steering Committee (PSC) meetings (see para. 112 below), etc.;
- working closely with UNDP Syria, to co-ordinate all missions by international consultants, including preparation of terms of reference;
- to develop, in co-operation with MAAR and/or MLAE, as relevant, details of equipment procurement; and
- to prepare overall project reporting.

102. It is worth recalling that the PCU is by definition the single non-sustainable component of the project. In other words, its existence is required only for the purposes of the project's operation; it should be expected to dissolve at the time of project completion, leaving the inter-sectoral co-ordination of protected area management to be achieved by the relevant Government agencies. This temporary character of the PCU should be widely understood so that parties may begin fully to assume these co-ordination responsibilities prior to the project's completion.

103. The PCU will receive periodic support from an international Project Implementation and Monitoring Expert (PIME), who will carefully monitor and support the implementation of all project components. This expert will undertake periodic visits to the PCU and to the project sites in order to review the progress of project implementation as compared with the defined baseline and with respect to the benchmark indicators highlighted in the Logical Framework Analysis Matrix (see Annex B). The PIME will represent one vehicle for introducing international best practices to the project sites. PIME mission reports will follow an agreed format and will represent an important technical source for keeping the UNDP Syria desk officer, UNDP-GEF Regional Co-ordinator and UNDP-GEF Regional Manager apprised concerning developments in project implementation. Support from the PIME will gradually decline over the course of project implementation, e.g., from four months in Year One to one month in Year Seven.

104. UNDP will provide both technical and administrative backstopping to ensure results-oriented management, proper administration of funds, maintain project accounts, facilitate staff recruitment and procurement processes, monitor resource mobilization of baseline and co-finance as contemplated in project document. Financial transactions will be subject to annual audits undertaken by internationally certified auditors.

⁵⁷ A complete TOR for the PCU, as well as for the NPD, NPMs and PIME (see below, para. 102), will be appended to the UNDP project document.

105. A Project Steering Committee (PSC) will meet on an annual basis with the role of overseeing project planning, implementation and performance. It will consist of representatives from UNDP, MLAE, MAAR, the national executing agency and each of the participating provinces. The PSC will be responsible, *inter alia*, for adopting annual work programmes prepared by the PCU.

106. Stakeholder consultations during project design: The project formulation process, and in particular the definition of problems and solutions—the latter encompassing objectives, outputs and activities—has involved a wide and lengthy process of stakeholder consultation. Initial consultations with MLAE and MAAR laid the foundation for the PDF-B process and made clear early on that the project would adopt a different approach from that taken by the WB-GEF project. Following the selection of sites, site visits took place that widened the circle of participation in two ways. First, provincial and district-level officials were consulted and provided with initial introductions to the project's purpose and methodology. Consultations were held with officials ranging from the Provincial Governors to the Provincial offices of MLAE to the Provincial and District-level Departments of Forestry. Second, initial consultations were held with local people living in and around project sites, many of whom had quite distinct, and not always positive, views of the PAs.

107. Consultations with these two types of stakeholders – official and local – continued throughout the PDF-B preparation process. Officials were brought together twice at national level, first for a Project Development Workshop utilizing the LFA methodology and second for a Project Endorsement Workshop. These discussions, along with bilateral discussions involving the Minister of MLAE and Deputy Minister of MAAR, were critical in ironing out a foundation for co-operation between the ministries, as well as for detailing the nature of GEF support.

108. Site-level forestry department officials and local inhabitants were again consulted, this time at length, during the preparation of site profiles. During this process, a team of eight national consultants spent several weeks at the sites, gathering information for their sectoral reports. These consultations were essential for gaining a better view of what was happening at each site.

109. Stakeholder participation during project implementation: Stakeholder participation during project implementation will be ensured through a number of mechanisms. The project will establish two main vehicles for participation in the decision-making process. These are outlined below.

110. **ADVISORY COMMITTEES OF DIRECT RESOURCE USERS**: As other experiences suggest, long-term resource use and biodiversity conservation have a better chance of success if genuine avenues are available for the participation of local stakeholders in the management of biodiversity resources. Consultations undertaken during the PDF-B stage strongly suggested that resource users whose livelihoods would be most directly affected by the GEF alternative need to have a formal structure for participation and a direct communication link with the local and international experts involved in the management of the project. This formal and direct participation is even more important when resource users appear particularly vulnerable, as has been observed in several project sites. These committees will provide independent inputs into the definition, implementation and evaluation of project activities. As the name indicates, their role would be of an advisory nature and their recommendations would not be binding. However, their recommendations would constitute formal annexes of the project annual review and formal annexes to the minutes of the project sub-steering committee meetings. This should ensure that the opinions and interests of those most vulnerable enter the project's decision-making process.

111. Representative from farmers' and herders' associations are good candidates for the above committees. Other likely members include representatives from groups engaged in educational or social / organizational activities such as the party youth groups (*Shabibah*) and the womens' union. Their role can

be of particular importance where raising public awareness is an issue both within the stakeholder community and among the general public as a whole.

112. Certain key stakeholders from within the community should also be considered as candidates. Often, the latter group is not organized by means of association or other similar structures. The project will have to undertake an effort either to foster the creation of associations or help the group in selecting candidates that fully represent their interests in the project's decision-making process. The committees might also include representatives from the tourism sector since tourism is expected to play an important role in presenting alternative sustainable means of livelihood.

113. **SUB-STEERING COMMITTEES:** In addition to the above advisory committees, the project will have sub-steering committees at each project site. These will comprise representatives from the formal structures of government, other stakeholders in each site and at least one member of the above "advisory committee of direct resource users". The presence of village leaders within these sub-steering committees would be highly desirable. These committees would provide guidance to project activities, serve as one of the main vehicles for stakeholder input, and review, approve and monitor the annual workplan for each project site. Their maneuverability and degree of freedom would be limited by the boundaries given by the overall framework of activities defined by the project document and the PSC.

114. The objective of having the above two types of committees acting simultaneously is two-fold. The first objective is to ensure the participation of stakeholders in the formal project decision-making process (mainly done through the Sub-steering committees). The sub-steering committees are endowed with formal tools to influence the design and implementation of project activities. The second objective is to provide a backup channel ("advisory committees of direct resource users") that can ensure that the interests of most vulnerable groups are not diluted whenever sub-steering committees comprise relatively big numbers of participants or present significant power asymmetries. Together, these structures are aimed at ensuring that project management units have access to inputs from all relevant stakeholders, that stakeholders have the tools to participate in project activities, and that the most vulnerable groups are heard and not disproportionately affected by any alternative.

115. Finally there is a need to set up a monitoring committee which is able to study and quantify the impact of any program or activity likely to affect stakeholder resources and subsistence. Monitoring results would then act as an indicator as to whether these programs are having a positive or negative impact on the community, which in turn would act as a gauge as to whether the project is succeeding or failing and in which sectors. Members of this committee should be recruited from the national consultants and key decision-makers within government. Local stakeholders have been purposely excluded from this committee due to the need for objective analysis.

FINANCIAL ARRANGEMENTS

116. A financial plan with timing of disbursements is not applicable as this is not a phased project. The timing of disbursements will be determined at the project implementation phase.

117. Incremental costs: The incremental costs to be financed by the GEF amount to US\$3.5 million,⁵⁸ complemented by total co-financing of US\$3.4 million, for a total alternative project cost of US\$6.9 million. The requested GEF grant therefore amounts to 50.7% of the total costs of the GEF Alternative, with the remaining 49.3% contributed by the Government and UNDP Syria. The incremental cost analysis

⁵⁸ This figure includes \$194,000 for the PDF-B.

(see **Annex A**) sets out the rationale for the financing of project activities. GEF resources have been targeted towards activities consistent with GEF guidelines for incremental funding.

118. **Table 3** below presents a Proposed Project Budget and Financing Scheme

Table 3

Project Outcomes	TOTAL	GEF	Co-financing	
	(US\$ Million)	(US\$ Million)	Source	Amount (US\$) Million
Outcome 1: Policies and institutional systems that allow for the wise selection and effective operation of protected areas to conserve globally significant biodiversity	2.736	1.568	Gov't	0.483
Outcome 2: Effective techniques for PA management and biodiversity conservation have been demonstrated and are available for replication	2.971	1.624	Gov't	1.579
Outcome 3: Sustainable use of natural resources in and around protected areas is demonstrated through the development and implementation of a programme for alternative sustainable livelihoods and community resource management	2.162	0.100	UNDP-TRAC Gov't	1.000 0.345
Totals	6.699	3.292		3.407

119. Cost-effectiveness: The future costs of restoring the sites, should they be degraded, would be prohibitive, particularly given the sensitivity of these ecosystems. The loss of biodiversity induced by the current practices would likely be irreversible. This project is based on the assumption that taking a precautionary and fully participatory approach to conservation is the most cost-effective solution. Finally, the project's cost effectiveness will be greatly enhanced by its emphasis on integrating site-level and national-level capacity-building activities, which is considered essential to replication and thus to building up the national PA system in the long-term.

SUSTAINABILITY OF PROJECT RESULTS

120. Institutional sustainability: Biodiversity conservation requires sustainable solutions. It is meaningless to conserve species, habitat and genetic diversity for five or ten years, or even longer, only to have it lost subsequently. Thus, the ability to achieve benefits that are sustainable is an essential barometer of project success. The baseline assessment for this project has led to the conclusion that systemic improvements, in particular ones aimed at strengthening the institutions responsible for PA management, are the key to achieving sustainable conservation benefits. Thus, strengthening the capacities of key MAAR and MLAE departments responsible for PA management, as well as the inter-sectoral co-ordination mechanisms that tie them together, are important goals highlighted by Outcome 1.

121. Another important element of sustainability involves the role of the PCU. Quite often, a PCU can become a substitute, rather than a complement, for the Government agencies that a project is trying to help – a recipe for unsustainable benefits. In this project, the risk pertains especially to the inter-sectoral co-ordination mechanisms being established, since these will initially imply a strong role for the PCU. The project will pay attention to this risk and ensure that a progressive disengagement takes place, whereby the PCU can easily disappear at project closure, leaving sustainable co-ordination mechanisms among permanent national institutions in its place.

122. Technical sustainability: The project does not rely heavily on international experts, but rather places emphasis on building the capacities of local experts. Thus, for example, the main long-term expert will be recruited on a retainer basis to provide part-time support throughout the project duration. This support will diminish over the course of the project, from 4 w/m in Year 1 to 1 w/m in Year 7. It is expected that a critical mass of national-level expertise will be reached during the course of the project, thus substantially reducing the long-term needs for international expertise in PA management techniques.

123. Financial sustainability: The GEF alternative involves a one-time investment to develop the technical, managerial and operational framework for effective management of PAs through an array of capacity-building activities. Government has clearly indicated its willingness to finance the long-term costs of maintaining the PA system. With this in mind, the project will avoid creating high-maintenance operational systems at project sites, but will focus on essential needs for conserving biodiversity. In addition, the project will investigate various mechanisms for sustainable financing, including user fees, etc., as a source of financing support to complement regular budgetary allocations. The potential role of an Environmental Fund recently created by MLAE will also be investigated in this context.

124. Project risks and assumptions: Based on the logic of incremental cost matrix (see **Annex A**), achievement of project outcomes will follow from the successful completion of project activities. No other assumptions or risks have been identified at this level of the project.

125. In order for the three project outcomes to jointly achieve the project purpose, certain assumptions need to hold true. These include the following:

- Outcome 1: The Government of Syria guarantees the adoption/implementation of project recommendations, and the project receives the active participation and co-operation of relevant Governmental stakeholders.
 - The Government counterparts (MAAR and MLAE) were informed of this risk during preparation of the brief, and as a response the Government assured its full commitment to attain the project objectives (including sustainable use and development objectives) and readiness to implement the project recommendations, and based on this commitment the Government endorsement the brief and provided a co-financing letter.
 - The risk of a breakdown in co-operation between the key institutional partners, MAAR and MLAE: Minimizing this risk, which has been highlighted by the difficulties in implementation experienced by the WB/Slenfe project, has been a key objective of project design. Various design features, such as the implementation arrangements involving two project managers, have been incorporated in order to avoid any potential for gridlock in project implementation. Some features, such as the establishment of a strong, neutral PCU, may themselves create additional risks (in this case to sustainability), which have also been identified.

- The risk that other relevant institutional players may not have an adequate interest in participating: The decision to focus the project's limited resources on the two main partners – MAAR and MLAE – has created the risk that other relevant agencies may feel 'left out.' These include agencies with responsibility for protected areas (the Ministry of Irrigation and Directorate of Ports) and other agencies with cross-cutting interests, e.g., Planning, Education, Tourism and Fisheries. This risk will be mitigated by: (i) establishing close ties with the EU project at Um al Toyour (which involves the Ministry of Ports); (ii) by inviting other relevant agencies to participate in a Project Steering Committee, either on a continuous or ad-hoc basis, and; (iii) by including these agencies as targets of the project's awareness, and in some cases of its capacity-building, activities.
- Outcome 2: The main assumption here is that no major external threats or factors outside the systems boundary impact upon sustainable management of the sites. The fact that the sites are all in mountainous areas minimizes this risk, as there is no need to be concerned about 'upstream' impacts, for example on hydrological processes at the sites. However, the possibility of natural factors, such as drought and related impacts, such as fire, cannot be ruled out. The latter can be mitigated against through careful fire control methods, which already exist under the project baseline.
- Outcome 3: The major risk to this outcome involves the assumption that the socio-economic and human development priorities of local communities can be adequately addressed in order to ensure reduced anthropogenic impacts on the sites. General economic conditions may have an important impact, for example, on rural-urban migratory trends, joblessness, etc., and a negative scenario may place renewed pressure on natural resources at the site. The project has mitigated against this risk through what it believes to be adequate co-financing resources.

126. The root causes of threats to biodiversity are shown in the problem tree in **Annex F** and have guided the design of project interventions. Project planners have carefully weighed the likelihood of these fundamentals changing over the course of implementation and assessed the impact on outcomes.

127. Replicability: The project's basic design is meant to encourage replication beyond the three demonstration sites. Replication will thus be achieved through an iterative process linking national- and provincial-level co-ordination mechanisms (Outcome 1) and site-level management actions (Outcomes 2 and 3). As provincial and national-level units and their constituent personnel become involved with work at the demonstration sites and receive direct organizational support and training, their efforts to manage other sites will by definition improve. More specifically, the project will support the preparation of periodic policy analyses, with participation by MAAR and MLAE, in order to derive lessons learned from experience at project demonstration sites and to develop agreed strategies for applying these lessons at existing and proposed new PAs.⁵⁹

128. As highlighted in the STAP Review of the present project, project results are also expected to be potentially applicable in many areas of the Middle East, North Africa and SW Asia. Lessons learned from restructuring and reinforcing the PA system, as well as from encouraging participation of local communities, will be especially valuable. UNDP Syria and MLAE will co-operate in disseminating project results and lessons learned within the Middle East region and beyond.⁶⁰

LESSONS LEARNED, MONITORING AND EVALUATION

⁵⁹ See Annex 2, Logframe Matrix, Activity Area 1.1.

⁶⁰ See Annex 2, Logframe Matrix, Activity Area 1.4.

129. Lessons learned from previous projects: As noted above in the sub-section on “Technical Co-operation Context,” project design has been informed by the experience of the World Bank-GEF Arz/El Shouh MSP project. **Table 4** highlights the key problems identified by the SMPR for the above project and ways in which this project has learned from these lessons.

7 TABLE 4: LESSONS LEARNED FROM THE WB-GWF ARZ-EL SHOUBH MSP

Issue identified in SMPR	Adjustment made for this project
Implementation modalities and the breakdown of roles and responsibilities between MLAE and MAAR were not defined in a way that was both clear and acceptable to the two ministries. This proved a cause for continuing disagreement and led to substantial and persisting delays in implementation. The recruitment of a project manager was among the issues leading to disagreement.	The PDF-B phase has placed substantial emphasis on developing a clear, unambiguous division of responsibilities for the main project partners. In addition, it has tried to develop implementation modalities that will minimize the possibility of any future inter-ministerial disagreement leading to serious delays or even project ‘gridlock.’
Expected co-financing did not materialize, thus compromising certain key outputs, including support to legislative reform and development of sustainable livelihood options.	As per revised GEF procedures, co-financing is now guaranteed in writing from relevant sources. Procedures for closer monitoring of co-financing have also recently been put into place.
Operational difficulties associated with an inability to obtain key exemptions for tax and duty payments.	UNDP projects are tax exempted in accordance with the cooperation agreement between UNDP and the Government of Syria.

130. Project monitoring and evaluation: Monitoring and evaluation (M&E) of the project will follow the UNDP Program Manual and GEF M&E procedures. The project will be subject to tripartite review (TPR) at least once every 12 months, the first such meeting to be held at the end of the 11th month from the start of implementation. UNDP Syria will organize the TPR meetings. A project terminal report will be prepared by the Executing Agency for consideration at the terminal tripartite review meeting. It shall be prepared in draft sufficiently in advance to allow review and technical clearance by UNDP at least two months prior to the terminal tripartite review.

131. The Executing Agency will be responsible for ensuring the preparation of the harmonized Annual Project Report/Project Implementation Review (APR/PIR). This report is prepared and submitted to each TPR meeting at least one month in advance. Additional reports may be requested, if necessary, during the project lifetime. The APR/PIRs will be reviewed by the Technical Advisory Committee and shared with all project stakeholders. The APR/PIR will be submitted to UNDP Syria which will subsequently forward it to UNDP-GEF Regional Co-ordinating Unit (RCU) in Beirut. In addition, the National Project Director shall prepare and submit the quarterly project progress report to UNDP Syria and the Executing Agency.

132. The project will be subject to a mandatory final evaluation prior to its closure. The mid-term and final evaluations will be organized by the Executing Agency, in consultation with UNDP Syria and UNDP-GEF. Both evaluations will be undertaken by independent evaluation missions with terms of reference and Team Leader(s) approved by UNDP-GEF. Participation by UNDP-GEF or the Executing Agency will be funded from resources external to the project budget. The review mission will, if possible, include representatives from co-funding donors.

133. UNDP-GEF will also monitor project performance, particularly in line with the indicators included in the Logical Framework Matrix, annexed to the Project Brief. UNDP-GEF will participate in TPRs as necessary, depending upon the project implementation progress, issues raised in APRs and PIRs, and/or at the specific request of UNDP Syria. UNDP-GEF will also participate in the mid-term and final evaluations. Finally, financial audits of the project will be conducted annually.

134. Detailed biological and socio-economic surveys will be undertaken to provide a baseline for future monitoring and to provide a basis for adaptive management. In addition, field surveys will be sponsored during the life of the project to ascertain population trends for keystone species. A set of indicators of impact has been selected during project preparation and is provided in the logframe matrix (**Annex B**). Surveys will assess the social and economic impact of the project intervention and appraise social relations and conflicts between different stakeholders and stakeholder perception of the project impact.

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ANNEX A: INCREMENTAL COST ANALYSIS

1. Broad Goals

1. Syria has established its priorities in the area of biodiversity conservation through preparation of a National Biodiversity Strategy and Action Plan (NBSAP). This plan calls for a variety of short- and long-term measures aimed at enhancing conservation of biodiversity, including its agricultural components. Enhanced protected area management is an important component of this goal-setting document.

2. Global Environmental Objective

2. *The project's direct global environmental objective is the conservation of globally significant biodiversity within three project demonstration sites. This includes the conservation of important species, genetic and ecosystem diversity within these sites. In addition, through support to provincial and national-level structures, the project will contribute to the conservation of globally significant biodiversity throughout Syria. This will be achieved both through direct project actions as well as through an expected replication effect. The latter will be engendered through the demonstration and dissemination of a functioning model of protected area management, which is currently lacking in Syria.*

3. Baseline

i. Baseline situation

3. *Annex F below presents a problem tree, which describes the threats facing globally significant biodiversity in Syria and the accompanying barriers that have so far hindered the establishment of an effective system of protected area management as a tool for biodiversity conservation. The problem tree arose from a participatory process of threats analysis. The conclusion of this analytical process was that the main threats and barriers could be grouped into the following problem areas:*

- *Problem 1: Existing policy, legislative and institutional structures, particularly those related to protected areas management, do not provide effective support for biodiversity conservation or sustainable use objectives*
- *Problem 2: Protected area management systems at individual sites are poorly structured. PA managers have limited capacities to plan or implement systems and actions based on principles of sustainable use or biodiversity conservation.*
- *Problem 3: Local people living in and around existing PAs have few alternatives to unsustainable resource use and have an adversarial relationship with PA managers.*

4. *Taken together, the above three problem areas constitute the baseline situation upon which the present project seeks to build. Each is summarized briefly below.*

PROBLEM 1: POLICY, LEGISLATIVE AND INSTITUTIONAL STRUCTURES

5. *As described in the main text, responsibility for management of nearly all PAs in Syria rests with MAAR. However, MAAR and its Forestry Department have had little if any exposure to international developments and emerging concepts related to biodiversity management. Partly for this reason, there*

has been little effort made to manage these protected areas in the interests of biodiversity. Rather, the PAs have continued to manage largely as forest reserves. Prevailing policies and legislative requirements have not encouraged actions, for example, to identify, monitor or make efforts to conserve, important or rare animal or plant species or assemblages. Likewise, institutional structures within MAAR did not reflect the special importance of the PAs, which were supposed to be established.

6. In the case of MLAE, similar problems have prevented an effective contribution on its part to better PA management. First, MLAE lacked clear legislative guidelines to define its role in PA management. As a result, its attempts to engage MAAR in discussions or to foster actions for biodiversity conservation were scarcely successful. In the case of an ongoing WB-GEF project, the Cedar and Fir Protected Area project, this situation contributed to conflict between the Ministries and eventually to the effective paralysis of the project. Also, like MAAR, MLAE has been unable thus far to build adequate human capacities for a suitably effective contribution to PA management.

7. Under the baseline scenario, i.e., in the absence of GEF support for PA management, it is unclear whether substantial progress would be made in eliminating the above-described problems. As a result, globally significant biodiversity would almost certainly continue being eroded throughout the country, including within PAs. Baseline spending for institutional, legislative and policy reform under the baseline scenario, i.e., in the absence of a GEF project, has been roughly estimated at \$168,000 during the planned 7-year duration of the GEF project.

PROBLEM 2: PROTECTED AREA MANAGEMENT SYSTEMS AT INDIVIDUAL SITES ARE POORLY STRUCTURED.

8. Under the baseline scenario, management efforts at the three selected demonstration sites mainly involved patrolling for compliance monitoring, fire prevention and mono-specific afforestation. Under the baseline scenario, spending within these areas of activity would have been an estimated US\$1,374,000, with the large majority of these funds having been directed to mono-specific afforestation.

9. Notably absent for this list are a host of measures needed for effective protected area management, ranging from effective signage, zoning, management planning, ecological monitoring, education and awareness efforts, etc. In this case, the deleterious effects both of action (e.g. inappropriate afforestation techniques) and inaction (e.g., failure to undertake ecological monitoring or effectively reduce threats from local communities) together would contribute to increased loss of biodiversity under the baseline scenario.

PROBLEM 3: LOCAL PEOPLE LIVING IN AND AROUND EXISTING PAS HAVE FEW ALTERNATIVES TO UNSUSTAINABLE RESOURCE USE AND AN ADVERSARIAL RELATIONSHIP WITH PA MANAGERS.

10. Surveys conducted by a team of national consultants working during the PDF-B stage made frequent contact with local people living within and immediately surrounding the three demonstration sites. The findings of these surveys indicated varying levels of tension – from moderate to severe – between forest department personnel and local villagers. Villagers in general did not feel themselves to have been adequately consulted or involved in decisions related to resources that in some cases they had had access to for generations. Under the baseline scenario, gradual improvement might have been expected in these relationships, as communities became accustomed to recently enacted restrictions on access to resources, although increasing population pressures in project site areas might have partially mitigated these positive impacts.

11. Spending under the baseline scenario, aimed mainly at preventing local people from utilizing PA resources, is estimated at \$125,000 during the project period.

4. GEF Alternative Project

12. It should be noted that a great deal of progress has already taken place (particularly with respect to problem area 1), during the course of an extended PDF-B development process. While not all of this progress was directly due to the PDF-B, nevertheless it appears certain that it has served as a stimulus to many of the developments in this area. Thus, the alternative described below includes some developments, which have already taken place during the PDF-B process and will be built upon during the full project phase.

13. As called for by standard LFA methodology, the above-described three problem areas have been 'flipped' into outcomes to be achieved by the present project. These are discussed below.

OUTCOME 1 - POLICIES AND INSTITUTIONAL SYSTEMS THAT ALLOW FOR THE WISE SELECTION AND EFFECTIVE OPERATION OF PROTECTED AREAS TO CONSERVE GLOBALLY SIGNIFICANT BIODIVERSITY

14. This outcome will help to firmly establish and consolidate a national system for protected area management. Key steps achieved in Syria during the project preparation period have included passage of environmental legislation aimed, inter alia, at clarifying the role of MLAE in the PA management system, along with institutional changes such as the creation of a new Department for Biodiversity and Protected Area Management (DBPAM) within MAAR. During the full project phase, these developments will be consolidated through capacity building at individual and institutional levels, including the development of clearly defined and effective roles for Damascus-based units of MAAR and MLAE. Total costs of this component of the GEF alternative are estimated at US\$2.05 million of which \$1.58 million will be provided by GEF and \$0.48 million by Government.

OUTCOME 2 - EFFECTIVE TECHNIQUES FOR PA MANAGEMENT AND BIODIVERSITY CONSERVATION HAVE BEEN DEMONSTRATED AND AREA AVAILABLE FOR REPLICATION

15. Under Outcome 2, practical models of PA management will be made operational at three key demonstration sites. This will include the introduction of common PA management techniques such as zoning, management planning, etc. It will also involve a shifting / re-orienting of planned baseline activities, particularly afforestation, to better reflect biodiversity conservation objectives. Total costs of this component of the GEF alternative are estimated at US\$3.20 million, of which \$1.62 million will be provided by GEF and \$1.58 million will be provided by Government.

OUTCOME 3 - SUSTAINABLE USE OF NATURAL RESOURCES IN AND AROUND PROTECTED AREAS IS DEMONSTRATED THROUGH THE DEVELOPMENT AND IMPLEMENTATION OF A PROGRAMME FOR ALTERNATIVE SUSTAINABLE LIVELIHOODS AND COMMUNITY RESOURCE MANAGEMENT

16. Outcome 3 will develop and demonstrate models for transforming the presently difficult relationship between protected areas and their surrounding local populations. The process will begin by building on work undertaken in the PDF-B aimed at better understanding local inhabitants' present interactions with project sites, along with their socio-economic situations and development needs. This will be followed up by an effort to encourage the development of alternatives to present resource-intensive modes of economic behavior, e.g., firewood collection, goat grazing, etc. Total costs of this component of the GEF alternative are estimated at US\$1.45 million, including US\$1.0 million from UNDP, US\$0.35 million from Government and US\$0.10 million from GEF.

5. Scope of Analysis

17. The scope of the present incremental cost analysis (ICA) has geographic and thematic aspects. Geographically, the scope has been defined at two levels: first, it includes the three demonstration protected areas, which are the focus of activities under outcomes 2 and 3; second, it includes the entire PA management system as a focus of replication. Thematically, the project is closely focused on the development of an effective PA system as a tool for biodiversity conservation.

18. In terms of defining baseline and alternative levels of spending, the above-defined scope means that spending within the three demonstration PA has been included, along with national-level co-ordination efforts for the entire PA management system. However, operational expenditures at PAs other than the demonstration sites are excluded from the analysis.

6. Costs

19. Baseline expenditures within the systems boundary of the project outputs are estimated at US\$1.67 million. These are the estimated costs of all relevant investments, programmes and management activities that would have taken place in the absence of a GEF project.

20. The total cost of the alternative project necessary to ensure sustainable development and the conservation of globally significant biodiversity is US\$6.92 million. The total additional, or incremental cost, which is the difference between the baseline and the alternative projects, is US\$5.25 million.

Overall Objective: To ensure that Syria’s globally and nationally significant biodiversity is sustainably used by, and provides benefits to, its current generation while being conserved for the benefit of present and future generations worldwide

	Baseline (B) (existing environmental management)	Alternative (A) (additional biodiversity conservation measures)	Increment (A-B)
Global Benefits	<ul style="list-style-type: none"> Protected areas covering globally significant areas exist on paper, but are not subject to effective management actions or protection. Rare ecosystem assemblages, species and genetic diversity at these sites are at continuing risk of loss. Limited institutional, human and financial capacities put core biodiversity areas at risk The existing ‘system’ of protected areas management fails to encourage any effective connections or integration between site-level management and broader, bio-regional or national strategic conservation objectives, including those related to CBD implementation 	<ul style="list-style-type: none"> Practical tools for planning and managing protected areas for biodiversity are demonstrated at three sites National capacities to manage globally significant biodiversity are increased A national-level system for protected areas management, with co-ordination among all relevant ministries, ensures that individual PAs are managed with broader national or bio-regional-level conservation objectives paramount 	<ul style="list-style-type: none"> Globally significant species, ecosystem and genetic biodiversity is conserved at project sites Core biodiversity areas are conserved through informed management Prioritization and co-ordination of conservation effort enhances achievement of national- and global-level conservation goals within PAs and beyond
Domestic Benefits	<ul style="list-style-type: none"> Local people are putting pressure on limited resources, while confronting an unsympathetic management structure that fails to allow them an effective voice in management Officials and local people have a limited awareness of global biodiversity issues and the significance of their national patrimony 	<ul style="list-style-type: none"> Local people are able to take advantage of alternative livelihood opportunities and to participate in decision-making concerning local resources Awareness is raised together with practical skills in biodiversity conservation and sustainable use 	<ul style="list-style-type: none"> Improved sustainable use opportunities and a lower level of conflict between local people and authorities Increased awareness and knowledge

Outcome 1 - Policies and institutional systems that allow for the wise selection and effective operation of protected areas to conserve globally significant biodiversity						
Outputs	Baseline (B) (existing environmental management)		Alternative (A) (additional biodiversity conservation measures)		Increment (A-B)	
AA 1.1: Institutional capacity building for PA management	Gov't	\$39,000	GEF	\$270,600	GEF	\$270,600
			Gov't	\$139,000	Gov't	\$100,000
	TOTAL	\$39,000	TOTAL	\$409,600	TOTAL	\$370,600
AA 1.2 - Human resource development	Gov't	\$60,000	GEF	\$380,200	GEF	\$380,200
			Gov't	\$135,000	Gov't	\$75,000
	TOTAL	\$60,000	TOTAL	\$515,200	TOTAL	\$455,200
AA-1.3 Support for carrying out PA-related co-ordination responsibilities—MAAR	Gov't	\$49,000	GEF	\$355,800	GEF	\$355,800
			Gov't	\$149,000	Gov't	\$100,000
	TOTAL	\$49,000	TOTAL	\$504,800	TOTAL	\$455,800
AA-1.4 Support for carrying out PA-related co-ordination responsibilities—MLAE	Gov't	\$20,000	GEF	\$561,050	GEF	\$561,050
			Gov't	\$60,000	Gov't	\$40,000
	TOTAL	\$20,000	TOTAL	\$621,050	TOTAL	\$601,050
Outcome 1 totals	Gov't	\$168,000	GEF	\$1,567,650	GEF	\$1,567,650
			Gov't	\$483,000	Gov't	\$315,000
	TOTAL	\$168,000	TOTAL	\$2,050,650	TOTAL	\$1,882,650

Outcome 2 - Effective techniques for PA management and biodiversity conservation have been demonstrated and are available for replication						
Outputs	Baseline (B) (existing environmental management)		Alternative (A) (additional biodiversity conservation measures)		Increment (A-B)	
7.1.1.1 AA 2.1 - Local cadres are trained and qualified in ecosystem planning and management	Gov't	\$20,000	GEF	\$390,000	GEF	\$390,000
	TOTAL	\$20,000	Gov't	\$95,000	Gov't	\$75,000
			TOTAL	\$485,000	TOTAL	\$465,000
7.1.1.2 AA 2.2 - Adequate information is available to managers and decision-makers on fauna, flora and other aspects of natural systems at project sites	Gov't	\$30,000	GEF	\$325,600	GEF	\$325,600
	TOTAL	\$30,000	Gov't	\$90,000	Gov't	\$60,000
			TOTAL	\$415,600	TOTAL	\$385,600
7.1.1.3 AA 2.3 - Project sites are operated according to an approved management plan, including a functional zoning scheme, job descriptions, management hierarchy, a strategy for sustainably removing threats and rehabilitation measures	Gov't	\$39,000	GEF	\$313,600	GEF	\$313,600
	TOTAL	\$39,000	Gov't	\$109,000	Gov't	\$70,000
			TOTAL	\$422,600	TOTAL	\$383,600
7.1.1.4 AA 2.4 – Implementation of site management plans	Gov't	\$1,285,000	GEF	\$595,000	GEF	\$595,000
	TOTAL	\$1,285,000	Gov't	\$1,285,000	Gov't	\$595,000
			TOTAL	\$1,880,000	TOTAL	\$595,000
Outcome 2 totals	Gov't	\$1,374,000	GEF	\$1,624,200	GEF	\$1,624,200
	TOTAL	\$1,374,000	Gov't	\$1,579,000	Gov't	\$205,000
			TOTAL	\$3,203,200	TOTAL	\$1,829,200

Outcome 3 - Sustainable use of natural resources in and around protected areas is demonstrated through the development and implementation of a programme for alternative sustainable livelihoods and community resource management						
Outputs	Baseline (B) (existing environmental management)		Alternative (A) (additional biodiversity conservation measures)		Increment (A-B)	
Activity Area 3.1: Local community interaction with and socio-economic dependence on site areas and site resources are fully understood by site managers	Gov't	\$50,000	GEF	\$100,000	GEF	\$100,000
			UNDP TRAC	\$100,000	UNDP TRAC	\$100,000
			Gov't	\$100,000	Gov't	\$50,000
	TOTAL	\$50,000	TOTAL	\$300,000	TOTAL	\$250,000
Activity Area 3.2: Site management plans and operational actions address threats arising from local community activities in and around site areas			UNDP TRAC	\$100,000	UNDP TRAC	\$100,000
			Gov't	\$50,000	Gov't	\$50,000
	TOTAL	\$0	TOTAL	\$150,000	TOTAL	\$150,000
Activity Area 3.3: Alternative livelihood activities and opportunities are identified and made available to local communities where required to reduce or eliminate anthropogenic threats to site areas	Gov't	\$75,000	UNDP-TRAC	\$800,000	UNDP-TRAC	\$800,000
			Gov't	\$195,000	Gov't	\$120,000
	TOTAL	\$75,000	TOTAL	\$995,000	TOTAL	\$920,000
Outcome 3 totals	Gov't	\$125,000	GEF	\$100,000	GEF	\$100,000
			UNDP-TRAC	\$1,000,000	UNDP-TRAC	\$1,000,000
			Gov't	\$345,000	Gov't	\$220,000
	TOTAL	\$125,000	TOTAL	\$1,445,000	TOTAL	\$1,320,000
PDF-B			GEF	\$194,000	GEF	\$194,000
			Gov't	\$27,000	Gov't	\$27,000
			TOTAL	\$221,000	TOTAL	\$221,000
Project totals	Gov't	\$1,667,000	GEF	\$3,485,850	GEF	\$3,485,850
			Gov't	\$2,434,000	Gov't	\$767,000
			UNDP-TRAC	\$1,000,000	UNDP-TRAC	\$1,000,000
	TOTAL	\$1,667,000	TOTAL	\$6,919,850	TOTAL	\$5,252,850

Annex B - Logical Framework / Project Planning Matrix

	Description	Verifiable Indicators	Means of Verification	Risks and Assumptions
Overall Objective	To ensure that Syria's globally and nationally significant biodiversity is sustainably used by, and provides benefits to, its current generation while being conserved for the benefit of present and future generations worldwide			
Project purpose	To demonstrate practical methods of protected area management that effectively conserve biodiversity and protect the interests of local communities, while supporting the consolidation of an enabling environment that will facilitate replication and effective PA management throughout the country	<ul style="list-style-type: none"> • Overall human footprint within demonstration PAs, as defined by an impact reduction index to be developed under biodiversity monitoring programme, is measured annually and reduced 25% by Year 3 and 50% by end of project. • Species-specific surveys indicate at least 25% recovery in populations of target globally significant species by end of project • 40% of local communities involved in sustainable use of the natural resources in the 3 sites by end of the project • 50% increase in ecosystem integrity by end of the project and 50% decrease in level of threats • At national level, 40% increase in land area under PA status by end of project 	<ul style="list-style-type: none"> • Biodiversity monitoring reports (see AA 1.3 and 1.4) • Biodiversity monitoring reports (see AA 1.3 and 1.4) • Monitoring reports measuring people participation in the project • Biodiversity and natural resource monitoring reports • PA annual reports 	<ul style="list-style-type: none"> • Ecological corridors outside of PAs are maintained through effective landscape-level conservation, PA-extensions and additions •

	Description	Verifiable Indicators	Means of Verification	Risks and Assumptions
Outcomes	1 - Policies and institutional systems that allow for the wise selection and effective operation of protected areas to conserve globally significant biodiversity	<ul style="list-style-type: none"> • By end of Year 2, a detailed and agreed set of streamlined national institutional arrangements describing the functions of all units and agencies involved in PA management and clarifying their respective roles and mechanisms of co-operation • By end of Year 4, relevant HQ units possess a critical mass of trained staff able to effectively manage the overall PA system, including oversight of individual PAs • By end of project, MAAR has developed and is implementing a comprehensive set of HQ-based activities aimed at managing and extending PAs within forest areas and other dryland ecosystems (rangelands) • By end of project, MLAE is implementing a system for inter-sectoral co-ordination through which it is able to closely monitor and provide direction to other ministries to ensure that the national system of PAs plays a visible role in achieving national biodiversity conservation and sustainable development objectives 	<ul style="list-style-type: none"> • Inter-ministerial Memorandum of Understanding • Project reporting • Project reporting: mid-term and final evaluations • Project reporting: mid-term and final evaluations 	The project receives all required cooperation from relevant Government stakeholders.

	Description	Verifiable Indicators	Means of Verification	Risks and Assumptions
	2 - Effective techniques for PA management and biodiversity conservation have been demonstrated through the design and implementation of management plans at three sites	<ul style="list-style-type: none"> • By end of Year 4, local cadres and managers at project sites are trained in ecosystem-based management and have been exposed to examples of international best practices • By end of Year 2, baseline monitoring reports on biodiversity dynamics and natural resource management are available for each project site • By end of Year 2, integrated management plans are agreed at each site. Plans may be updated annually on a rolling basis thereafter • Management actions are implemented in accordance with management plans 	<ul style="list-style-type: none"> • Project reporting • Project reports – • Site management plans • Site management plans; site-based annual reports 	No major external threats or factors outside the systems boundary impact upon sustainable management of the sites
	3 - Sustainable use of natural resources in and around protected areas has been demonstrated through the development and implementation of a programme for alternative sustainable livelihoods and community resource management	<ul style="list-style-type: none"> • Examples of participatory management mechanisms and stakeholder feedback systems are incorporated into management plans and operations. • 40% of rural and bedouin communities involved in sustainable use of the natural resources in the 3 sites by end of the project 	<ul style="list-style-type: none"> • Management plans and operational policies, feedback from local stakeholders, management committees and community consultations. • Reports measuring local stakeholder participation in the project 	Socio-economic and human development priorities of local communities can be addressed in a sustainable manner while conserving the biodiversity of the project areas.
Activities	<p>Outcome 1 - Policies and institutional systems allow for the wise selection and effective operation of protected areas to conserve globally significant biodiversity</p> <p><i>Activity Area 1.1 Institutional capacity building for PA management.</i></p> <ul style="list-style-type: none"> o Review and rationalize task descriptions of relevant HQ units (MAAR and MLAE) to ensure minimal overlap and maximum coverage of required PA-management and co-ordination tasks. o Review and propose changes to relevant unit responsibilities and lines of authority within MAAR and MLAE o Preparation of a policy report describing in detail a set of streamlined, yet effective, national institutional arrangements for PA management. The report should include a detailed and comprehensive organigramme showing responsibilities of, and relationships among, national-level agencies for PA management o Above institutional arrangements should be codified formally, for example in a Memorandum of Understanding among relevant agencies or another formal policy agreement on institutional set-up. o Provide support for improved operational processes, such as planning and financial management o Prepare periodic policy analyses, with participation by MAAR and MLAE, to derive lessons learned from experience at project demonstration sites (see Outcomes 2 & 3) and to develop agreed strategies for applying these lessons at existing and proposed new PAs 			

	Description	Verifiable Indicators	Means of Verification	Risks and Assumptions
	<p><i>Activity Area 1.2: Human resource development</i></p> <ul style="list-style-type: none"> o Review and rationalize job descriptions of relevant staff within HQ units (MAAR and MLAE) to ensure minimal overlap and maximum coverage of required PA-management and co-ordination tasks. o Development and implementation of training programmes within MAAR and MLAE to upgrade PA-related management skills among relevant staff <p><i>Activity Area 1.3: Support for carrying out PA-related co-ordination responsibilities—MAAR</i></p> <ul style="list-style-type: none"> o Develop and implement methodologies and guidelines for baseline biodiversity information gathering, assessments and ongoing monitoring / inspection of PAs. o Improve capacities for investment planning related to PAs. o Develop and implement mechanisms for identifying and prioritizing potential new PAs within forest areas. These may include ecological surveys and social impact assessments to be undertaken prior to PA establishment. o Develop more biodiversity-friendly environmental remediation efforts. o Develop mechanisms to ensure that national-level wildlife conservation objectives are incorporated into site management planning. o Develop and implement national-level and site-specific strategies for conservation and regeneration of rare and threatened forest species. o Standardize reporting by provincial-level Forest Departments concerning PAs within their jurisdiction. Prepare and disseminate a single Annual Report covering MAAR-operated PAs. <p><i>Activity Area 1.4: Support for carrying out PA-related co-ordination responsibilities—MLAE</i></p> <ul style="list-style-type: none"> o Strengthen implementation of all legally mandated inter-sectoral co-ordination responsibilities related to PAs. These will include, <i>inter alia</i>, co-ordinating a national-level process of PA identification and selection. o Ensure that data and information flows from MAAR-managed and other PAs flow into a centralized data management system capable of monitoring biodiversity change within both PAs and the broader landscape. These should include both ecological information as well as information on threats and threat reduction, particularly at demonstration sites. o Based on information and data collected at both PA and landscape levels, produce periodic assessments of the efficacy of the national system for PA management and proposals for its improvement. These will constitute lessons learned, beginning with experience at demonstration sites. o Assess the existing system for Environmental Impact Assessment (EIA) as it relates to PAs and propose necessary revisions. o Develop rules and requirements for establishing and monitoring PAs, including financial and budgetary, ecological assessments (studies) as a tool for prioritization, (re)-definition of objective process for identifying, nominating and approving, social impact assessment prior to establishment. o Raise public awareness concerning the role of protected areas in biodiversity conservation in Syria. This should include preparation and wide dissemination of awareness materials including brochures, posters, a ‘user-friendly’ annual report, etc. o Disseminate project results actively within the Middle East region and beyond. <p>Outcome 2 - Effective techniques for PA management and biodiversity conservation have been demonstrated and are available for replication</p> <p><i>Activity Area 2.1: Training of local cadres and managers in ecosystem planning and management</i></p> <ul style="list-style-type: none"> o Training needs assessment and development of training programmes o Implement site-based training programmes and team-building exercises o Implement cross-site, job-specific training programmes o Undertake study tours to successful regional examples of protected areas, especially GEF project sites 			

	Description	Verifiable Indicators	Means of Verification	Risks and Assumptions
	<p><i>Activity Area 2.2: Implement biodiversity monitoring programmes</i></p> <ul style="list-style-type: none"> o Preparation of guidelines for data collection and monitoring by PAs (see AA 1.3) o Hold workshops to discuss monitoring guidelines with officials from each demonstration site o Add site-specific component to general monitoring guidelines for each site o Prepare initial baseline biodiversity report for each site based on agreed guidelines o Undertake follow-up monitoring throughout project lifespan o Regularly provide collected data in a standardized format to national-level database and GIS system being managed by MLAE (see AA 1.4) <p><i>Activity Area 2.3: Development of site management plans</i></p> <ul style="list-style-type: none"> o Review and assessment of current management practices, including policies of restoration using heavy vehicles, afforestation, etc., to assess suitability and impacts on biodiversity o Develop draft 5-year management plans to address issues such as threat removal, development of functional zonation schemes, revisions to job profiles and management structures, ecological rehabilitation measures and investment planning o Review draft management plans with institutional partners and with local stakeholders o Finalize management plans <p><i>Activity Area 2.4 Implementation of site management plans</i></p> <ul style="list-style-type: none"> o Specific activities to be defined under 2.3 above <p>Outcome 3 - Sustainable use of natural resources in and around protected areas has been demonstrated through the development and implementation of a programme for alternative sustainable livelihoods and community resource management</p> <p><i>Activity Area 3.1: Assessment of local community relationships with demonstration sites and site resources</i></p> <ul style="list-style-type: none"> o Undertake a comprehensive, participatory socio-economic assessment of each site, building upon the preliminary assessments undertaken during the PDF-B phase. o Assess the extent and nature of local community dependence on site resources, both directly (fuel, water, food, medicinal or income-generating resources) and indirectly (existence values, environmental values including watershed and soil stability, etc.) o Identify, quantify and prioritize various anthropogenic threats to the sites, e.g., grazing, agriculture and agrochemical use, hunting, wood-chopping, charcoal-making, etc. o Assess the extent to which these anthropogenic threats affect biodiversity in and sustainable use of the sites and the degree to which these threats need to be reduced or eliminated to achieve sustainability. o Record and catalogue local community knowledge of site resources, including medicinal plants and their properties <p><i>Activity Area 3.2: Site management plans and operational actions address threats arising from local community activities in and around site areas.</i></p> <ul style="list-style-type: none"> o Incorporate socio-economic resource use data into site management information (GIS) systems. <p><i>Activity Area 3.3: Alternative livelihood activities and opportunities are identified and made available to local communities where required</i></p> <ul style="list-style-type: none"> o Undertake briefings and discussions with local communities to explain how their activities affect the sustainability of the sites, and the necessity for finding alternative sustainable livelihood activities to substitute for existing unsustainable activities. o Identify, in close consultation with local communities, potential alternative livelihood activities, which are acceptable substitutes for existing income and resource sources. o Research and pilot-test potential alternatives to identify those sustainable livelihood activities, which are most suitable for local socio-economic and ecological conditions. 			

	Description	Verifiable Indicators	Means of Verification	Risks and Assumptions
	o			Once suitable alternative livelihood activities have been identified and accepted by local communities, provide technical and financial support for the implementation of these alternatives in all affected communities.

8 ANNEX C. RESPONSE TO EXTERNAL REVIEWS

STAP Roster Technical Review of Project Brief UNDP PIMS: 227 Biodiversity

SYRIAN ARAB REPUBLIC: Conservation and Protected Area Management

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Introduction

The Protected Area system of the Syrian Arab Republic is still under development and the 16 currently existing Protected Areas together represent one of the lowest national percentages under protection in the region. The present proposal aims to provide a practical system that will achieve the conservation of important aspects of the country's biodiversity while at the same time involving local communities and respecting their interests and rights. It aims to do this by putting in place structures, mechanisms and legislation that will (1) allow rational selection and effective operation of Protected Areas; (2) develop and apply appropriate techniques for the management of these areas and the conservation of the significant biodiversity that they contain; and (3) develop and apply methods for the sustainable use of resources within and adjacent of these area through involving the local communities in their management and provision of alternative means of maintaining their livelihoods.

With a land area of 18 377 000 ha, Syria has 461 000 ha of forests, representing 2.5% of the land area and 229 000 ha of plantation forests. Many of the old mountain and coastal forests that house cedars, pines, firs, junipers and oaks, as well as wild relatives of domestic fruit trees such as almonds, plums and pears, are threatened.

Due to the prevailing harsh climatic conditions of the region, much of the forestland comprises of savannah areas, open woodlands, and land with scattered trees and xerophytic shrubs. The central and eastern parts of the country are largely occupied by very extensive areas of steppe or semi-desert (the Badia), representing more than half the national territory.

In terms of species biodiversity, Syria has a flora of some 3,100 species of which 243 (7.8%) are endemic to the country, some animal 2500 species, including 360 bird species nearly half of which are migratory, and 125 mammal species of which the large mammals seriously affected by habitat loss, competition with grazing sheep and goats, and uncontrolled hunting. Although Syria is rich in biodiversity, it is an exaggeration to claim (para 7) that it is considered the third most biologically diverse country in the Mediterranean Basin – unless one means the Eastern or Levantine sector.

The local population in rural areas are heavily dependant on the natural resources

found in forests, steppe (Badia), and around rivers, for their daily livelihood (food, medical plants, fuel, etc) and this leads to increased pressure on ecosystems and their component species in heavily populated regions (Syrian Second National Report to CBD).

Scientific and technical aspects

The project preparation was undertaken as part of a GEF PDF-B grant. This included a careful and detailed process of site selection: out of 13 candidate sites, five were shortlisted, chosen according to a set of criteria (see Annex K: Site selection). Following visits to the five short-listed sites by an interdisciplinary team of national and international experts and their recommendations, three sites were chosen by the Project Steering Committee, that are 'both globally significant in their own right as well as representative of the critical issues facing biodiversity in Syria and thus amenable to replication ...'(para 27).

The chosen sites are the Al Fronloq protected area, Jebel Abdul Aziz Mountain, and the Abou-Qubies protected area. Each of the three selected areas was then studied by national experts and the Project Brief contains summary descriptions of their physical and biological features, baseline activities and threats to them. These provide an excellent basis for assessing their significance and the problems involved in maintaining them and conserving their biodiversity on a sustainable basis. The Al Fonloq site contains *Pinus brutia* forests and pure stands of *Quercus cerris* subsp. *pseudocerris*; the Jebel Aziz contains populations of *Pistacia khinjuk*, a primitive pistachio species, and *P. atlantica*, recognized as a priority species for forest genetic resources by IPGRI/CIWANA, as well as various fruit tree wild relatives; and the Abou-Quibies protected area has forests of *Quercus calliprinos*, *Carpinus orientalis*, *Fraxinus ornus* and *Quercus cerris* subsp. *pseudocerris*, and various important resident bird species.

The Project is a large and complex one, spanning seven years. The Project Brief is generally well presented and documented and makes a persuasive case. It is refreshing to find that the information on biodiversity has been well researched and highlighted. Perhaps not enough detail has been given of the effects on biodiversity of the ways in which it is used by local populations (about half of the country's population is rural), such as the levels of wild harvesting of medicinal and other useful plants and the effects these have on population survival and maintenance. Likewise, areas such as species population recovery programmes, which are technically difficult and time-consuming, are somewhat glossed over (Annex B Logical Framework verifiable indicators).

The **Baseline Course of Action** is presented as separate scenarios for the three selected sites. These describe the socio-economic context, including the types of activity engaged in, such as agriculture, livestock raising, hunting and off-farm income generation, and the current site management and policy for each site and detail the ongoing threats that would continue to affect the biodiversity of the areas under the baseline scenario – fire, over grazing, wood cutting and charcoal making, hunting, tourism, encroachment and land conversion and roads. Table 2 summarizes the threats in the three project sites (para 78). It is noted that, for example, there is a proposal still under consideration by the Ministry of Agriculture and Agrarian Reform to extend the Al-Fonloq site from 1500 ha to 4500 ha; in the Jebel Abdul Azia, in the context of the PDF-B preparatory process, the site was extended from 4220 ha to 49 000 ha, and it is estimated that about 10% of the population of each village is involved in collecting medicinal herbs, while

collection of seed of *Pistacia atlantica* and *P. khinjuk* is an important activity; while at the Abou-Qubies site, which is species-rich and may house some 25 rare or threatened species, there is an issue regarding the size of the area, as 11 000 ha were designated originally in 1999 but the national team survey found that only 5000 ha were included – a matter that needs to be resolved; it also notes that apart from patrolling no management practices are carried out at this site.

An analysis of the baseline situation is given in Annex A (Incremental Cost Analysis) and a problem tree is presented as Annex F. These make the point that the present system of Protected Areas does not function well enough to conserve adequately the country's global and nationally important biodiversity, that management systems are poorly structured at the demonstration sites, that existing policy, legislation and infrastructure related to PA management do not incorporate biodiversity or sustainable use considerations, and that people living in and around PAs have few alternatives to practicing unsustainable resource exploitation and have an adversarial relationship with PA managers.

A summary of the Beginning of project situation to compare with the End of project situation (given on p. 22) would have been useful.

The **GEF Alternative Course of Action** gives as the development objective, to ensure that the country's globally and nationally important biodiversity is sustainably used by present generations while conserving it for future generations, while the project objective is the demonstration of practical methods of PA management that will conserve biodiversity effectively and allow the lessons learned to be applied to PA management throughout the country. To achieve this proposes three outcomes which amount to a thorough overhaul of the PA system at all levels and in all its components. The first of these addresses the fact noted in the baseline assessment that Syria has yet to develop a properly functioning and integrated system for PA management and includes activities that will build institutional capacity, develop human resources, provide technical support in both the Ministries involved (Agriculture and Agrarian Reform and Environmental Affairs), and support for coordination in both Ministries.

Some of these activities are bold and far-reaching and recognize current weaknesses in the PA present system, notably lack of coordination and rationalization of tasks, and communication failure within and between the key Ministries. It stresses the need for ensuring that protected areas function do not operate in isolation but as part of a broader landscape although it is not clear if this implies adopting a landscape or bioregional approach to biodiversity management which would certainly be desirable if not essential in this context.

The recognition that baseline biodiversity information needs to be gathered is welcome as are the proposals for developing a centralized data management system for monitoring biodiversity change (AA-1.4.ii) although it is not clear if the size and complexity of such a task is fully appreciated by the Project designers. Outcome 2 includes the implementation of the biodiversity monitoring programme (AA 2.2) that will build on work undertaken during the PDF-B to produce base-line assessments of floristic and faunal diversity. It is not clear from the objectives listed whether this also involves developing the baseline data (see AA 2.2 ii) and if so how it relates to the activities envisaged in Outcome 1. Outcome 2 also includes training of personnel in ecosystem planning and management which will be a critical factor in the project. As expertise

in this area is currently lacking, it is not clear how this training will be undertaken and by whom. This should be made clear and the necessary budgetary provisions specified. Likewise, the development of site management plans will depend on support from 'Damascus-based experts' although it is not clear whether these already exist or will have to be appointed from outside the country.

The third outcome will be the demonstration of sustainable use of natural resources in and around the protected areas. The Project Brief recognizes that this will be critical as some of the local communities concerned have been hostile to forestry officials involved in maintaining forest areas and it is essential that they become instead partners in biodiversity conservation if the project is to succeed. The activities involved here include a detailed assessment as to how the local population use the existing resources, either directly as medicinal plants, fuel wood, food, grazing, hunting etc. or through their dependence on ecosystem services such as soil protection, climate moderation etc. These assessments aim to include recording local knowledge as to how such resources are used (ethnobiology), which is can be a difficult, specialized and lengthy task that also involves consideration of intellectual property rights which are not mentioned in the Project Brief. Models for the equitable sharing of benefits deriving from these resources will also have to be developed. Even more difficult will be the activities involved in finding alternative ways of providing sustainable livelihoods and income generation (AA 2.3).

The end of project situation (para 91) will, if achieved, represent a major transformation of the current structure, capacity and effective management of the three project sites, the conservation and sustainable use of globally and nationally biodiversity that they house, and the offer the possibility of applying these nationally to the whole Protected Area system.

Global environmental benefits and/or drawbacks

Several global environmental benefits would derive from this Project if successfully implemented, such as:

- The conservation and sustainable use of globally significant biodiversity within the three project demonstration sites, notably forest ecosystems that contain important stands or populations of economically important tree species such as *Pistacia khinjuk* and *Quercus cerris* subsp. *pseudocerris*.
- The conservation of the habitats of numerous endemic species of plants, birds, and large mammals, many of which are rare or endangered
- The protection of the habitats of numerous migratory species of birds
- The conservation of the habitats of important wild relatives of fruit trees and forages
- Experience of the establishment and implementation of Protected Area system in which stakeholder local communities are closely involved in the planning and management

The GEF context, goals and operational strategies, Council guidance and provisions of the relevant Conventions

The Project satisfies all the main strategic considerations listed in the Operational Strategy 2 Biodiversity and meets the requirements of the GEF OP 1 on Arid and Semi-Arid Zone

Ecosystems. It aims at the conservation and sustainable use of important components of biological diversity, such as significant ecosystems, globally threatened species, conservation of wild relatives of crops and forages, through many of the activities listed in O.P. 1.17. The Project clearly addresses many of the provisions of the Convention on Biological Diversity, notably Articles 6, 7, 8, 10, 11, 12, 13, 14, 15, 16, 17 and 18 and Annex 1 Identification and Monitoring.

Regional context

South West Asia of which Syria forms part is an important area biogeographically and is at a phytogeographical crossroads where the Holarctic and Palaeotropical floristic kingdoms meet. It includes elements of both the Irano-Turanian Regional and the Mediterranean Centers of Endemism. Most of the region is arid or semi-arid and subject to threats by overgrazing, overharvesting of fuelwood, and the mainly rural population depends to a considerable degree on exploiting local resources such as medicinal and aromatic plants and fuelwood. It contains significant forest resources of cedars, firs, oaks and pines, many of whose habitats have been seriously depleted and it is important that significant samples of these forest ecosystems be maintained and managed sustainably in all countries of the region where they occur. The region is a centre of diversity and origin for many plants of agriculture and houses important wild crop relatives. Syria has a relatively rich flora and a considerable amount of unique biodiversity (endemic plants and animals).

Replicability

If successfully implemented, the Project contains a number of elements that will be of application throughout the Middle East and SW Asia. Especially valuable will be the lessons learned from restructuring and reinforcing the Protected Area System and the management and infrastructure needed to implement it, as well as solving communication problems and fostering co-operation between the different Ministries and Agencies involved. Equally important will be the lessons that can be learned from the introduction of mechanisms for the participation of local communities in the planning and running of the protected areas and for devising means of providing alternative livelihoods for those displaced from areas where they currently enjoy both ecosystem benefits and exploitation of wild plant and animal resources for food, fuel, medicine and other purposes. The biodiversity information gathering mechanisms, databases and monitoring systems will also be of great interest to other countries in the region and should be easily applicable to them where appropriate.

Sustainability

As the Project Brief makes clear, the successful conservation and sustainable use of biodiversity depends on having in place institutional structures that are effective, efficient and permanent. This will require a radical restructuring of the present PA system. It also recognizes the risks involved in the necessarily strong PCU being seen as a substitute for rather than a complement to the existing Government agencies. It will be essential to ensure that after the end of the project

and the disbandment of the PCU adequate and permanent mechanisms for maintaining coordination between agencies are in place.

The Project plans to build up a critical mass of local expertise rather than depending on external international consultants and this is laudable although it is not at all clear how the necessary training can be implemented with the limited external support apparently envisaged. The amount of training required is very large and varied and a clearer picture of how this will be achieved – in house, secondment, short courses, reverse training etc. – and the numbers and grades of staff involved (pre-existing or to be recruited) needs very serious consideration as the success of the whole project will depend on it.

Contribution to the improved definition and implementation of GEF strategies and policies

If successful, the radical reorganization and restructuring of the PA system should provide valuable lessons for other countries faced with similar problems. The Project should contribute to developing GEF strategies for Protected Area management, especially in arid and semi-arid zones and provide valuable lessons for refining strategies for sustainable management of plant and animals resources in such environmentally vulnerable areas. The development of participatory management systems involving local communities and the planning of alternative sources of livelihood for those displaced from areas that will be protected will also make a useful contribution to GEF strategies and policies for arid zones.

Secondary issues

- **Linkages to other focal areas**

In the light of the apparently increasing aridity of the region and its consequences for PA management and biodiversity protection, the Project has some relevance to the Focal Area of Climate. Some aspects of the Project are also relevant to the Land Degradation Focal Area.

- ? **Linkages to other programmes**

The Project Brief notes (para 95). that it has been designed so as to provide to provide complementarily to other GEF projects, notably (1) the World Bank-GEF MSP project at Arz/El Shouh protected area near Slenfe (see also paras. 24-25 and 121) which has demonstrated a clear challenge to be overcome related to institutional co-ordination between MAAR and MLAE; and (b) the UNDP-GEF's regional project for Conservation and Sustainable Use of Dryland Agro-Biodiversity of the Fertile Crescent (approved in October 1998).

There should also be linkages with the UNDP/UNEP-supported Biodiversity Planning Support Programme Arab States (in which the WESCANA programme of IUCN–The World Conservation Union, coordinates the Arab States region and its 16 countries) and its database on biodiversity expertise in the region.

- ? **Degree of involvement of stakeholders**

Involvement of key stakeholders, notably local communities in and around the Protected Areas, is a major component of the Project and a detailed stakeholder plan is given in Annex G. The project formulation process has involved extensive stakeholder consultation. Stakeholder participation during project implementation will be ensured through an 'Advisory committee of direct resource users' and a 'Project's sub-steering committee' for each project site.

? **Capacity-building aspects**

Much of the project is concerned with and dependent on the capacity building for developing the management structures for a transformed PA system and for practical implementation of PA management policy at each site and field operation.

? **Innovativeness**

The most innovative aspects of the project will be the major effort to ensure local stakeholder participation in planning and management of the three selected sites and the intention of providing alternative livelihoods for local populations that are adversely affected by the Project.

Conclusions

This is a complex and ambitious project that is largely dependant on (1) being able to develop successfully new management structures and put in place the necessary infrastructure to manage and develop the Protected Areas, and on (2) training the cadres of staff at various levels need to achieve this. If successful it will provide a useful model for the region as well as achieving the conservation of significant amount of globally important biodiversity at the ecosystem, species and genetic level.

I strongly support the proposal which is well presented and detailed. My only serious reservation concerns the ability to develop sufficient trained capacity within the planned time frame to undertake the very wide range of operations involved, such as baseline biodiversity surveying, information system development, ecosystem and species management, monitoring, species recovery, ethnobiological and socio-economic surveying, complex negotiations with local populations and other stakeholders, and reorganization of infrastructure and communication systems at all levels.

19 October 2004

Summary of changes made in response to GEF Sec comments

Comment	Response and description of change to brief
The area of the three protected areas	These are 4,500 ha (Al Fronloq), 49,000 ha (Jebel Abdul Aziz) and appx. 5,000 ha. (Abou Qubies), for a total of approximately 58,500 ha. This information is now provided on the cover page of the Executive summary and in the titles preceding the descriptions of each PA.
Further details (mechanism, budget) of how replication is expected to be achieved through this project)	<p>A new summary of replication issues is provided in the revised brief (see paragraphs 127-128), along with the following new activities:</p> <ul style="list-style-type: none"> • Prepare periodic policy analyses, with participation by MAAR and MLAE, in order to derive lessons learned from experience at project demonstration sites (see Outcomes 2 & 3) and to develop agreed strategies for applying these lessons at existing and proposed new PAs. (Activity Area 1.1 - this activity will receive an estimated US\$50,000 in GEF support.) • Disseminate project results actively within the Middle East region and beyond (Activity Area 1.4 – this activity will receive an estimated US\$50,000 in GEF support).
Co-financing (cash or in-kind)	This is now specified on the cover page of the brief
The difference and value added of the training for MLAE and MAAR by both (WB/GEF and UNDP/GEF) projects	<p>The following text had been added as footnote²⁹ of the revised project brief:</p> <p>“Training and capacity building under the UNDP-GEF project will build on and complement support being provided through the WB/GEF project. However, as a full-size project with a larger training component, it will provide greater depth and breadth of support than that being provided under the WB-GEF project. At local and provincial levels, training will benefit MLAE and MAAR officials who were not involved with the WB-GEF project, which did not work in their provinces. At national level, the UNDP-GEF project will further build capacity among officials who may have already received some support from WB-GEF. Careful co-ordination between the projects will ensure that there is no overlap in areas covered by the two projects’ training components.”</p>

Annex D: Response to STAP Review

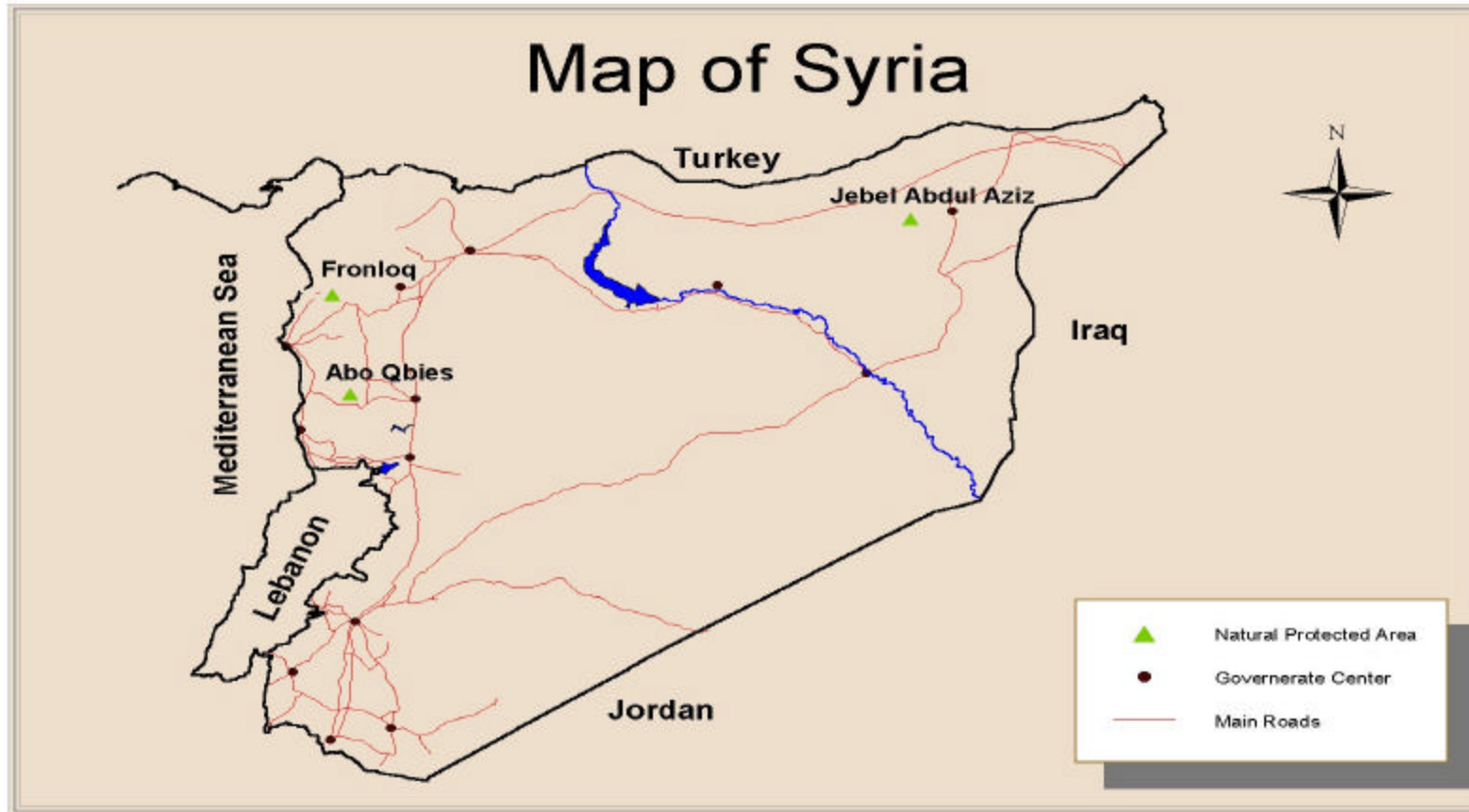
The project proponents would like to thank the STAP Reviewer for his constructive comments on the draft project brief. The following table matches issues raised in the review with specific responses, including, where appropriate, changes made in the revised brief.

Issue raised by the reviewer	Discussion and / or summary of changes made in revised project brief
1 - "Although Syria is rich in biodiversity, it is an exaggeration to claim (para 7) that it is considered the third most biologically diverse country in the Mediterranean Basin – unless one means the Eastern or Levantine sector."	New text reads: "In terms of floristic biodiversity, Syria is considered one of the most biologically diverse countries in the Mediterranean Basin."
2 - "Perhaps not enough detail has been given of the effects on biodiversity of the ways in which it is used by local populations (about half of the country's population is rural), such as the levels of wild harvesting of medicinal and other useful plants and the effects these have on population survival and maintenance. "	As far as the project team is aware, there have been no assessments on the scale or nature of medicinal plant/ NTFP use in Syria. However, the scale and nature of NTFP use in demonstration site areas appear to be fairly stable. Local community use has been going on for a long time, so if it were at unsustainable levels the resource would have been exhausted long ago. There have been no large-scale changes in the scale or nature of NTFP use in recent years which would indicate that sustainability has been compromised; no major population shifts or socio-economic changes to increase or decrease reliance on NTFP, and no sudden commercialization or intensification of NTFP use that might push harvests above sustainable levels. Thus, based on available data, it would appear reasonable to conclude that populations of NTFPs should be sustainable for now. Obviously this can and should be investigated further during full project implementation
3 - "...areas such as species population recovery programmes, which are technically difficult and time-consuming, are somewhat glossed over (Annex B Logical Framework verifiable indicators).	The feasibility of species population recovery programmes will be assessed in greater detail in the inception phase of the full project.
4 - "A summary of the Beginning of project situation to compare with the End of project situation (given on p. 22) would have been useful."	The reader is referred to the introductory matrix of the ICA (incomplete at the time of the STAP Review), which provides a clear before and after picture related to national and international benefits.
5 - "[The draft brief] stresses the need for ensuring that protected areas ... do not operate in isolation but as part of a broader landscape although it is not clear if this implies adopting a landscape or bioregional approach to biodiversity management which would certainly be desirable if not essential in this context."	The project proponents believe that it is important for the project to remain focused on protected areas management. However, Syria's network of protected areas can and should play an integral part in a 'bio-regional approach' to biodiversity management. Such an approach would consider factors such as the role and adequacy of existing PAs in achieving national-level conservation objectives, the importance of corridors between PAs and the need for conservation actions within the broader landscape. A macro-level overview of this type is within the mandate of MLAE and increasing capacities in this area will form an element of the co-operation taking place under AA-1.4. Description of this AA has been revised accordingly.
6 - "Outcome 2 includes the implementation of the biodiversity monitoring programme...It is not clear from the objectives listed whether this also involves	Yes, additional baseline data concerning biodiversity at project demonstration sites should be collected under AA 2.2 (see LFM activities list).

Issue raised by the reviewer	Discussion and / or summary of changes made in revised project brief
<p>developing the baseline data (see AA 2.2 ii) and if so how it relates to the activities envisaged in Outcome 1.”</p>	
<p>7 – “Outcome 2 also includes training of personnel in ecosystem planning and management which will be a critical factor in the project. As expertise in this area is currently lacking, it is not clear how this training will be undertaken and by whom. This should be made clear and the necessary budgetary provisions specified.”</p>	<p>As noted in the draft brief, training will take place under AA 1.2 and 2.1 and will take a variety of forms, including site-based training programmes and team-building exercises, inter-site exchanges and study tours. It is clear that, particularly during the initial period of the project, access to international expertise will be an important part of a strategy for building capacities. At some point, the project also intends to rely on a ‘training of trainers’ approach, so that staff within Damascus- and/or Provincial capital-based units can gain the capacity and tools needed to share knowledge with field-based staff.</p> <p>As far as budgetary provisions are concerned, noting the concerns expressed by the STAP Reviewer and following further consultations with Government counterparts, the size of both GEF and Government co-financed budgetary allocations for training have been increased substantially in the revised brief.</p>
<p>8 – “The amount of training required is very large and varied and a clearer picture of how this will be achieved – in house, secondment, short courses, reverse training etc. – and the numbers and grades of staff involved (pre-existing or to be recruited) needs very serious consideration as the success of the whole project will depend on it.”</p>	<p>See previous comment. Also, note that training needs assessment and training programme development will be important activities during Year 1 of the project.</p>
<p>9 – “There should also be linkages with the UNDP/UNEP-supported Biodiversity Planning Support Programme Arab States (in which the WESCANA programme of IUCN–The World Conservation Union, coordinates the Arab States region and its 16 countries) and its database on biodiversity expertise in the region.”</p>	<p>This linkage has been added to the project brief (see paragraph 97) and will be actively pursued during the full project phase.</p>
<p>10 – “My only serious reservation concerns the ability to develop sufficient trained capacity within the planned time frame to undertake the very wide range of operations involved, such as baseline biodiversity surveying...” etc., etc.</p>	<p>Please see previous comments concerning increases in relevant budget lines. Indeed, the incremental cost analysis has been reviewed based on the STAP Reviewer’s comments and the overall size of the proposed GEF grant has been moderately increased as a result.</p>

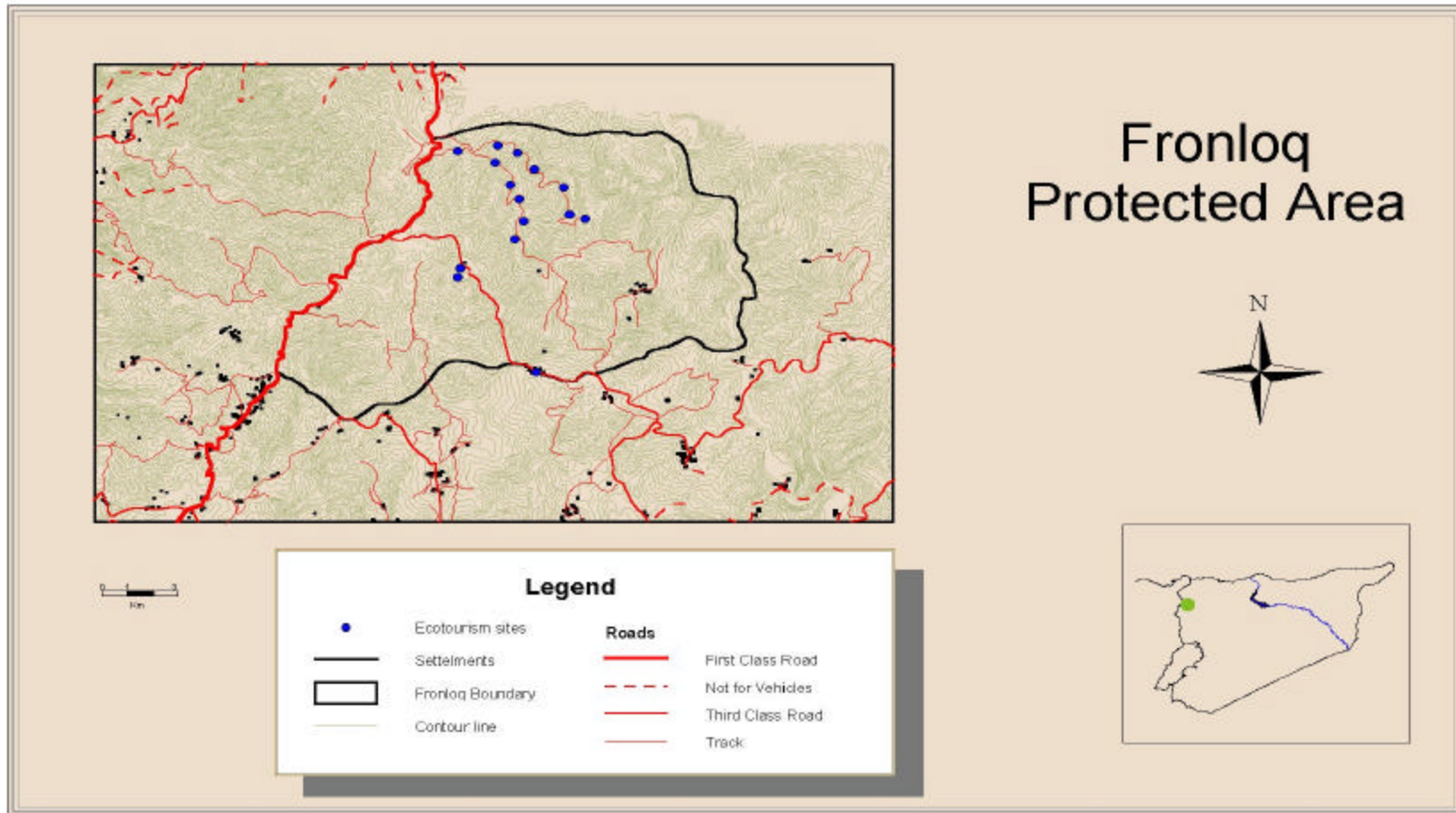
Annex E: Maps

1. Map of Syria

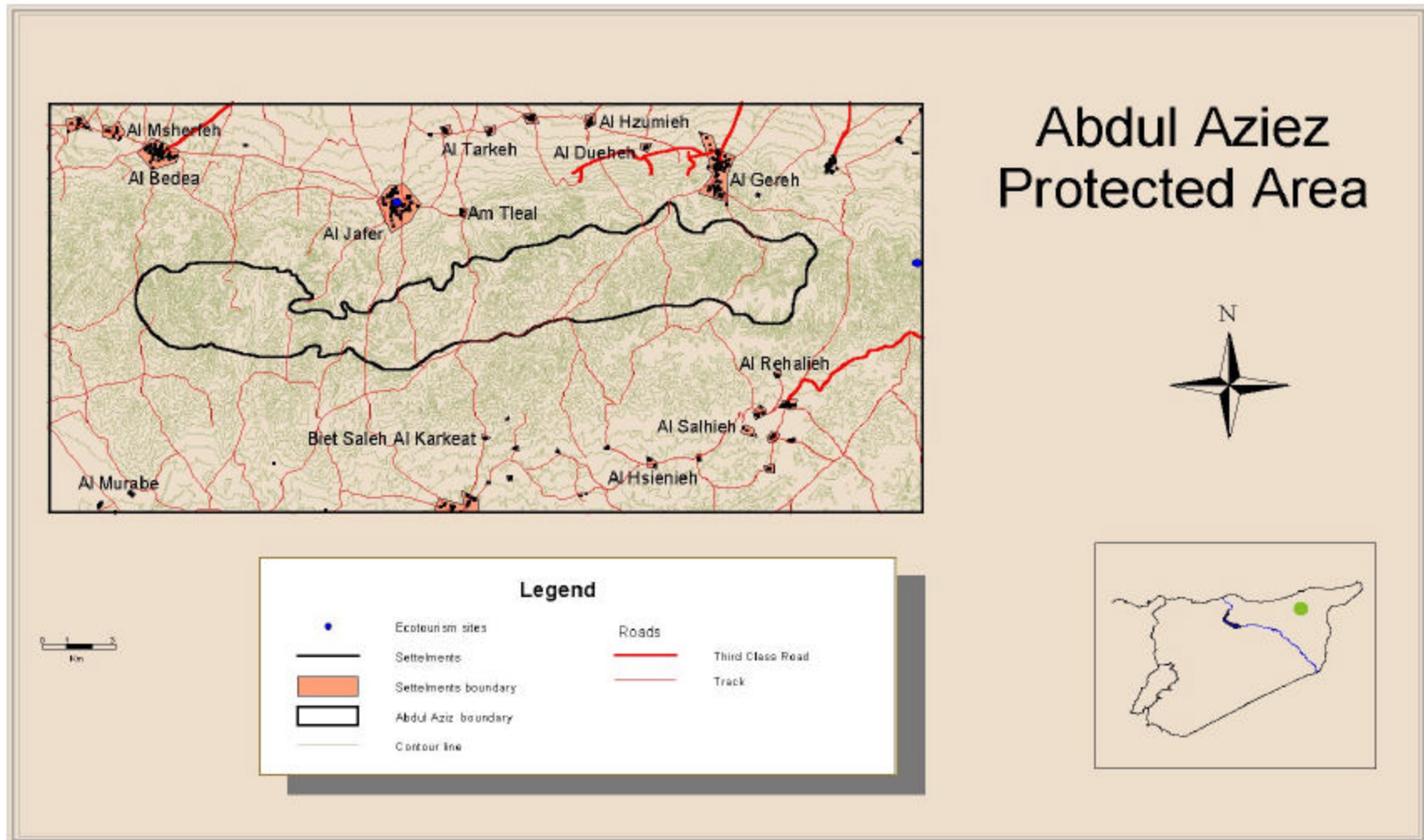


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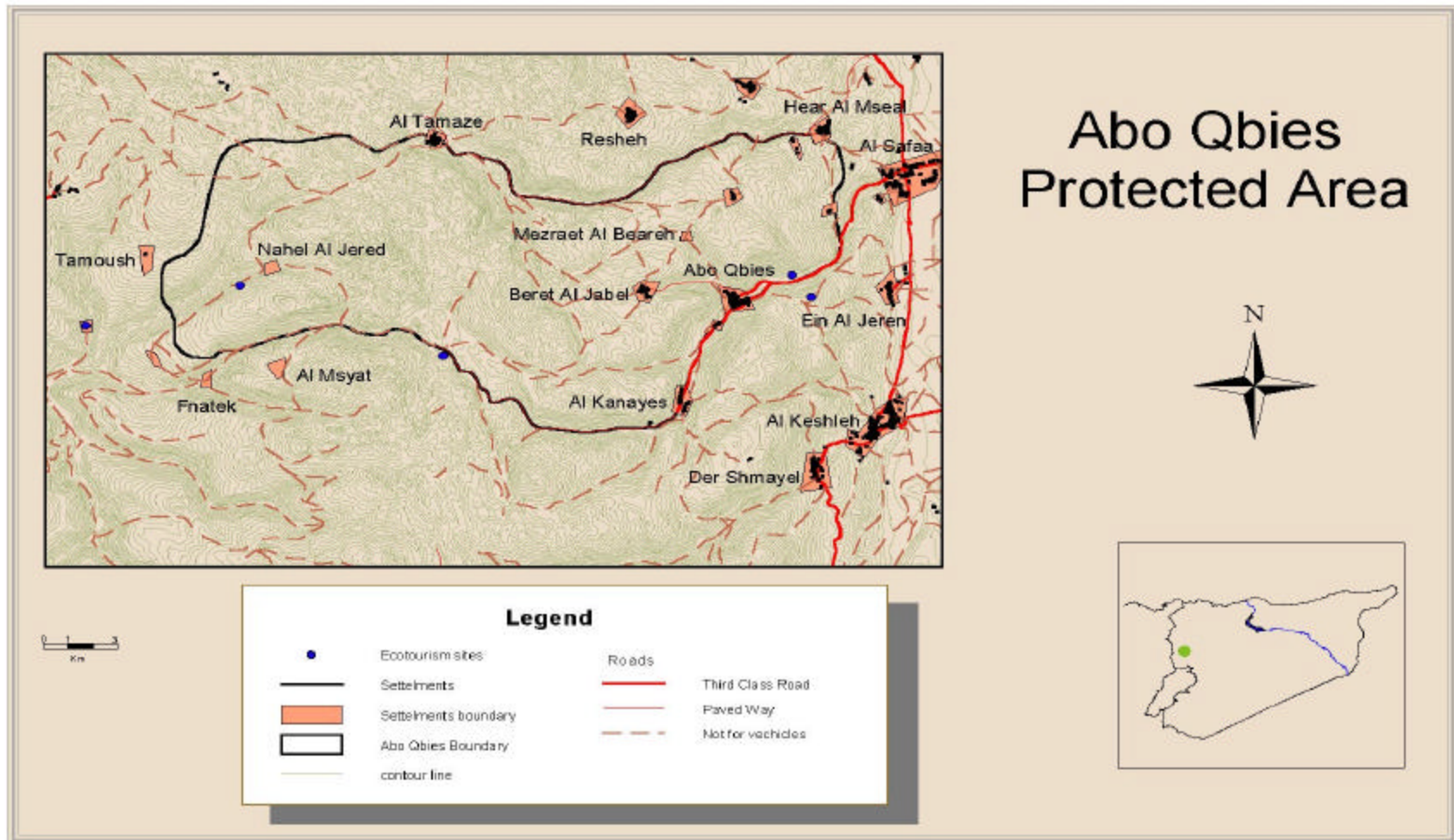
Map 1: Al Fronluk



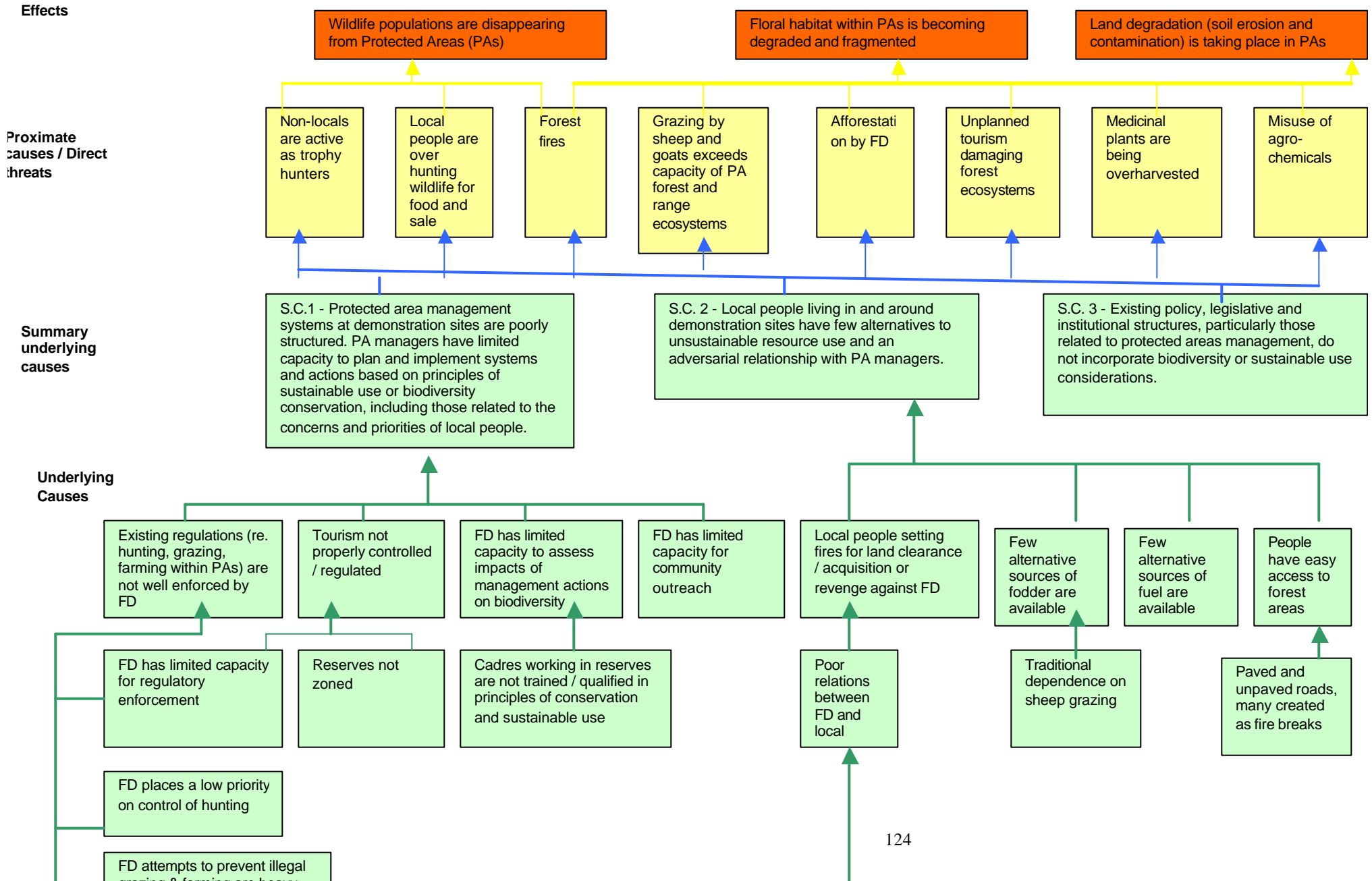
Map 2: Jebel Abdul Aziz



Map 3: Abu Qbais



Annex F: Problem tree



Annex G: Stakeholder participation plan

1. Introduction

The project formulation process, and in particular the definition of problems and solutions—the latter encompassing objectives, outputs and activities—has involved a wide process of stakeholder consultation. As other experiences suggest, long-term resource use and biodiversity conservation have a better chance of success if genuine avenues are available for the participation of local stakeholders in the management of biodiversity resources. Recent awareness as to the importance of input by local stakeholders has led to growth in the number of local groups involved in one way or another in environmental protection activities. These include recent campaigns by participating government organizations – MLAE and MAAR – and NGOs on issues such as water conservation and reforestation.

The project objectives and activities have thus been defined with particular attention to the involvement of local stakeholders. The project design has received genuine support from the executing and implementing agencies as well as local stakeholder groups such as farmers and herders' associations. This support is expected to ensure that the project as formulated contains solid avenues for the participation of local stakeholders in the decision-making process and in the implementation of project activities.

2. Description of PDF-B consultation process

The project formulation process, and in particular the definition of problems and solutions—the latter encompassing objectives, outputs and activities—has involved a wide and lengthy process of stakeholder consultation. Initial consultations with MLAE and MAAR laid the foundation for the PDF-B process and made clear early on that the project would adopt a different approach from that taken by the WB-GEF project. Following the selection of sites, sites visits took place which widened the circle of participation in two ways. First, provincial and district-level officials were consulted and provided with initial introductions to the project's purpose and methodology. Consultations were held with officials ranging from the Provincial Governors to the Provincial offices of MLAE to the Provincial and District-level Departments of Forestry. Second, initial consultations were held with local people living in and around project sites, many of who had quite distinct, and not always positive, views of the PAs.

Consultations with these two types of stakeholders – official and local – continued throughout the PDF-B preparation process. Officials were brought together twice at national level, first for a Project Development Workshop utilizing the LFA methodology and second for a Project Endorsement Workshop. These discussions, along with bilateral discussions involving the Minister of MLAE and Deputy Minister of MAAR, were critical in ironing out a foundation for co-operation between the ministries, as well as for detailing the nature of GEF support.

Site-level forestry department officials and local inhabitants were again consulted, this time at length, during the preparation of site profiles. During this process, a team of eight national consultants spent several weeks at the sites, gathering information for their sectoral reports. These consultations were essential for gaining a better view of what was happening at each site.

The main mechanism by which information/data was gathered was through extensive consultations with both the local communities and local representatives of the various government institutions active or involved in the area. The reason for using this dual approach was to ensure that a complete picture was formed and to avoid any bias.

The local stakeholder consultations were carried out through a field survey whose main objectives were to collect data on: a) the means of livelihood, modes of subsistence and other patterns of human behavior employed by the local populations in the three proposed project intervention sites. b) Assess the current levels of awareness on conservation management and receptivity to new initiatives within these populations.

The Field Survey included the establishment of key contact households/sources within each location. Choosing these household members was via probability sampling in order to avoid collecting data from non-representative segments of the population. The techniques of sampling included stratified sampling and judgment sampling to get the best and most accurate results. During site visits extensive interviews were then carried out with the identified key households using both formal and informal questioning techniques.

The survey covered key issues such as:

- 1- The main modes of subsistence including employment in the area as a whole and by the designated households in particular.
- 2- Various relevant activities and patterns of human behaviour such as wild plant collecting, hunting, main sources of fuel, modes of transport, types and sources of building materials, etc.
- 3- Spatial distribution and land usage for both domestic and non-domestic purposes.
- 4- Test the existing levels of awareness on conservation resource management.
- 5- Test response to proposed creation of protected sites and related initiatives.

In particular data gathered from the last two items was used to help prepare a wider multi-disciplinary approach/strategy with other consultants to promote the project amongst the local populations within the proposed sites and gain their cooperation.

3, Summary findings of socio-economic and stakeholder analysis⁶¹

A. Al-Fronloq

1. Socio-economic description

Frunluq is a densely wooded area of the coastal mountain region. There are a number of villages (5 main villages) in the habitable parts of it most of which are centered on water sources (natural springs). Al-Aterah is in the middle of the protected area and has a population of 200-300 inhabitants depending on the season. The remaining villages are on the perimeter of the proposed protected area and consist of the following villages in order of magnitude: Al-Khadra with 500 inhabitants rising to 700 in the summer; Al-Kabir with a population of 180-200 and rising to 400 in the summer (tourist) season; Al-Kantara with about 200 inhabitants and Beit Shorduk/Shoruok with about 120 inhabitants. There are also a number of very small settlements on the periphery with populations ranging from 20-30 inhabitants and one abandoned village (Al-Kanais). There are a large number of springs in the area, which as mentioned the villages tend to centre around. In Al-Kabir for instance there are nearly twenty springs serving the village.

There are several population centers nearby the protected area, including the town of Kassab (6 km from the site), the village of Qastal Mouaf (5 Km west), and the town of Rabeeha (8 Km to the southeast). The main urban center connected with the site is the city of Lattakia (50 Km). No nomadic groups or transhumants are present in the site area.

⁶¹ The findings summarized in this section are presented at greater length in the socioeconomic reports prepared by Dr. Amr Al-Azm and Dr Nour Al-Din Mouna

The main sources of livelihood in the Frunluq region are agriculture, animal herding and tourism. The total area set aside within the Frunluq forest for agriculture is 580 ha., of which only 5% is for wheat and barley production. The remaining 95% is used in horticulture. The average land holding for wheat and barley is between 0.4-0.6 ha. The most important crops however are fruits. Over 50% of the horticultural land is set aside for apples, 10% is for almonds and the remainder for citrus and other fruits, including olives. These are grown in orchards distributed within and around the protected area. Grazing (mainly cows, since goats were banned 30-40 years ago) is also carried out within the protected area. The cows are either local breeds, which tend to be hardier, or mixed breeds. The average milk yield for the local breeds is approximately 5 kg/day while mixed breed cows yield between 15-20 kg/day. They are usually fed concentrates purchased from the local markets (70%) or grazed on stubble following the harvest season (30%). Beekeeping and honey production is a rapidly growing alternative source of income with most of the sales going to passing trade and tourists. There are also a number of stalls and small cafes (about 8 in number) also centred around a major spring, which usually operate during the summer tourist season.

The population of the area is of varying ethnic origins. For instance, Al-Khadra is about 10 percent Arab and 90 percent Turkmen. Nearly 6 percent of the population of the above villages migrates to urban areas (mainly Lattakia), while about 2 percent migrate to Lebanon as workers. Major reasons reported for out-migration include small size of land holdings, land fragmentation, population pressures and low-income levels.

2. Conclusions

The main problem facing the inhabitants of the region particularly those within the protected area is that of sustainability and this is partially demonstrated by the high level of migration and gradual abandonment of these villages. The current available land usage for agricultural activities, grazing or other subsistence activities is insufficient to sustain existing populations and further restriction will inevitably be applied within the protected area. Tourism is providing an important alternative to some of the local populace but the benefits are unevenly distributed and often haphazard. Improving relations and greater involvement by the authorities managing the proposed site in regulating and organizing many of the suggested activities is essential and would provide much needed local employment opportunities. There is also a need for the involvement of local communities in the management of the protected area especially with regards to the balancing of conservation requirements with their economic needs.

Solutions and Recommendations:

The solutions outlined here have been put to various members of the local community especially identified key stakeholders and their responses and opinions have been noted.

- a) Tourism has the potential of becoming an important alternative source of income. By organising and regulating it would be possible to increase the level of income generation currently derived and protect the habitat at the same time. The licensing of stalls and picnic/beauty spots within the protected area would help control tourist access to the forest since they would only be permitted to sit in these specified areas. This should include the provision of electricity, toilet and rubbish disposal facilities. Regulating the use of fire to cook food would also be desirable whereby only the stall holders or licensed charcoal grillers would be allowed to light fires in these spots. The tourists/picnickers would then be required to pay the stallholder a predetermined fee for the services provided. In return the stallholders would be required to maintain, protect and look after their licensed spot and act as litter collectors, fire wardens and guides
- b) Providing loans and credit facilities especially to the poorer members of the community would be desirable. These could then be used to set up small businesses most popular of which appear to be: beekeeping and honey production, fattening of calves for resale rearing mixed breed cows. Mushroom farming was suggested (see socio-economic

report) and whilst no one knew anything about it they were receptive the idea. It should be noted however that mushrooms require storage facilities and rapid access to markets as they spoil quickly. Such credit schemes have already been tried out in this and other areas with very mixed results. The main reasons for failure is usually either impractical repayment schemes or more importantly very complicated and restrictive selection criteria for loan qualification. These credit facilities should therefore be provided in conjunction with training and education concerning the care, maintenance and upkeep of the proposed project so that the investment is not lost due to the death or mismanagement.

- c) Wild herbs such as Zoufa (*Micromaria julian*), basil, etc, are all gathered by the locals in season. Apart from what is kept for personal consumption the rest is sold to dealers and merchants who frequent the area. The sale of these herbs represents another important and viable source of income with excellent potential for development. These herbs maybe packaged and sold locally to the heavy passing tourist trade, which already frequents the area in search of honey and olive oil. In particular, those which are used for making herbal tea, decorations and basil can become very marketable if packaged and presented/marketed appropriately.

B. *Jebel Abdul Aziz*

1. Socio-economic overview

Jebel Abdel-Aziz is occupied mainly by Bedouins belonging to the "Mountain Baqqara" tribe, which is a branch of the main and well-known "Baqqara" of Der El-Zor. Other groups known "Bani Sabaa" belong to Taye Tribe settled in Om Talil village (100 people), and some households belong to "Noaem Tribe" settled in Al-Sayed Hassan village (120 people). They are located mainly on the plateaus in the central region in villages or settlements of which there are about ten, with another ten in the surrounding foothills. The current total population is about 15,000, although this figure fluctuates due to the seasonal influx of other groups (such as the Jbour, Shrabim and Udwan clans) using areas of the Jebel Abdel-Aziz for grazing, especially in winter. Average family size in the mountain area is estimated at 10 persons.

The nearest urban center is the city of Hasakeh which is also the capital of the Mouhafaza of Hasakeh. It is worth noting that the Mouhafaza of Hasakeh has over 1.2 million inhabitants, comprising nearly seven percent of the total population of Syria, the majority of whom are working in agriculture and animal husbandry.

About 40 percent of the total labor force in the mountain area is involved in livestock production, 20 percent in agriculture production and 20 percent in off-farm activities. Males from 10 to 15 years of age are mainly involved in shepherding, while those between 15 and 55 work in both agriculture and sheep-raising. Women constitute about 60 percent of on-farm labor. It is estimated that the average working period varies between 6 and 9 months per year for men and 8.5 to 11 months for women.

The main sources of subsistence in the area are thus agriculture (marginal farming) and animal husbandry. Agriculture is based on dry farming on the plateaus and in the lowlands around the mountain, the main crops being wheat and barley. Barley is the dominant crop used primarily as fodder for the animals, whilst wheat is grown mostly for local household consumption. There are also some vegetables grown but this tends to be on a very small scale mainly in gardens for personal use. This however has been severely affected by the recent drought with most people turning over their land for pasture. The drought has also affected the main sources of drinking water (wells), many of which have turned brackish. Recently, local people have had to rely on water being brought in by trucks and some settlements have been abandoned at

least temporarily. The drilling of new wells is currently banned, which has added to the problems of water shortages.

Animal husbandry is a very important source of subsistence in the Jebel Abdel-Aziz and the region as a whole. It is based mainly on ungulates (sheep, goat and to a lesser extent camel) with sheep being the dominant form of livestock (about 95%). Their main pasture areas are on the mountain especially during autumn/winter and spring. The lowlands and plains are also used especially after the harvest season. Overgrazing is one of the major problems in the region due to the uncontrolled use of the territory for grazing and has been a main source of conflict between the locals. These conflicts can sometimes take on a very serious nature especially if deaths occur leading to clan feuds that can last for decades. One of the main sources of trouble has been the annual influx of Kurds from the Malkiyyeh area who used to bring large herds to graze on the mountain. This practice however has been banned for a number of years now and has had a dramatic effect on reducing the problem of overgrazing.

Other sources of subsistence include the use of natural resources such as hunting and the gathering of wild plants and fruits. The Jebel Abdel-Aziz has wooded areas, which include pistachio, fig, hawthorn and terebinth. The terebinth was favored by the locals for the oil that can be extracted from its seeds and its wood is considered to be the best for burning. This has in turn led to serious problems of deforestation and ensuing soil erosion.

The afforestation project launched by MAAR in 1988 created significant job opportunities in the project area where nearly 400 local workers were employed. Consequently, the rate of unemployment has declined recently to 30 percent. Out of the unemployed people, 70 percent are women and 30 percent are men. MAAR's Law No. 20 has prohibited woodcutting in the mountain site area since 1993. However, women, who participate in the silviculture program are allowed to collect pruning operation residues. Collection of dead and broken branches is permitted for fuel wood uses. Grazing in the reserve area is not allowed except in the locations where trees are more than ten years of age providing that sheep but not goats are permitted for grazing.

Women mainly collect medicinal herbs on the mountain from April through June. Collected materials are consumed in the form of tea and spices and are used for medical purposes. It is estimated that about 10 percent of the population of each village are involved in medicinal herb collection. The estimated average income generated from marketing the medicinal herbs in Al-Hasakeh city is about 60-70 SP/day (2000 SP/month). Truffles are harvested in certain years during March and April. *Pistacia atlantica* and *P. khinjuk* seeds are collected during October and November. Other potential uses of *Pistacia atlantica* seeds include the extraction of oil and the extraction of gums from the terebinth. An individual can collect between 15-20 Kg/yr of pistachio seeds. It is estimated that the total production of seeds in the mountain may reach up to 10,000 Kg in good years of fruiting.

Finally there are a number of known prehistoric sites in the Jebel and a structure known as the "Succar" palace. There is also what appears to be a Roman road, running straight from tell Tamr to the "Succar" palace. The lowland areas and plains around the Jebel are rich in major archaeological sites especially in the Khabur valley.

2. Conclusions

Currently approximately over half of the total area of the Jebel Abdel-Aziz has been declared a protected area, which has placed severe restrictions on the local settlements especially those who traditionally relied on these areas for their pasture as well as a source of firewood for cooking and warmth in the winter months. The result has been a serious decline in the number of animal herds, which as previously mentioned, are the main source of subsistence and an increased dependence on agriculture. The area under cultivation, however, is neither sufficient

nor reliable enough to sustain these communities leading to hardship and a constant decline in the standard of living. The active and apparently rampant forestry regeneration program has also contributed greatly to the problem by further restricting access to both grazing and land which may otherwise be opened up to agriculture. Lack of schools, education and employment opportunities in the Jebel Abdel-Aziz, have further exacerbated the situation, although the forestry program does provide some temporary employment on short-term contracts.

If further constraints or strains are imposed on the existing communities without solutions to the existing problems and issues or providing alternative means of sustainable livelihood, gradual settlement abandonment may become the only viable option remaining to these communities. Therefore, there is a need for the involvement of local communities in the management of the protected area especially with regards to the balancing of conservation requirements with their economic needs.

Solutions and Recommendations:

The solutions outlined here have been put to various members of the local community especially identified key stakeholders and their responses and opinions have been noted.

- a) Provision of loans and micro-credit facilities especially to the least well off members of the community could then be used to set up small businesses such as fattening of calves for resale or rearing mixed breed cows. Similar credit schemes have already been tried out in this and other areas with very mixed results as previously mentioned. The main reasons for failure is often due to unworkable repayment schemes coupled with very complicated and restrictive bureaucratic procedures for loan qualification. These credit facilities should therefore be provided with training and education concerning the care, maintenance and upkeep of the proposed project so that the investment is not lost due to the death or mismanagement.
- b) An exchange program of sheep for mixed breed cows should be encouraged and supported since it would alleviate the need for grazing and the much higher yields obtainable from this breed should if properly managed, cover the increased costs of relying almost exclusively on animal feed. Current local experiences with this breed have been mixed however but that is mainly due to lack of experience in managing it.
- c) Providing water for irrigation either through rain traps, cisterns and small dams or wells would greatly improve crop yields and allow for more variety to be cultivated.
- d) Although some of the local inhabitants gather and sell in the local markets herbs, seeds and fruits, the majority shy away from this form of activity or will not openly admit to participating in it for social taboo reasons. The sale of truffles however appears to be more acceptable probably due to its high profit returns where an estimated income of about 200 sp. a day has been quoted by the locals. Other high income activities such as the production oil from *Pistacia atlantica* seeds and the extraction of gums from the terebinth should also be encouraged. *Pistacia atlantica* oil for example can fetch a price of 350 sp/kg as opposed to that of olive oil which is priced at 100 sp/kg.

C. Abu-Qubeis

1. Socio-economic overview

The total population living in and around the site is estimated at 5,100. These are divided amongst nine villages: three are entirely located within the site boundaries, three border the site and three are located on the periphery, yet outside of the site. In addition, there are six towns located within fifteen kilometers or so of the site, with a combined population of some 45,000 people. Finally, three main urban centers – Hama, Tartous and Lattakia – are all found within 55-85 kilometers distance.

Nearly 50-60 percent of the households living in the above nine villages have benefited from land reform in the nearby Ghab plain. Therefore, seasonal migration takes place from all of the villages to the Ghab plain where wheat, barley, cotton, sugar beets and maize are grown. About 10 percent of the population of each village appears to migrate to urban centers, mainly Damascus, compared to about 7 percent who migrate to Lebanon as workers. Major reasons reported for out-migration include small size of land holdings, land fragmentation and its remoteness, population increases and low incomes.

Nearly 95 percent of the total labor force in the site area are involved in on-farm activities, of which 80 percent are working in plant production mainly horticulture, and 20 percent in livestock husbandry, mainly goat raising. Boys mainly herd goats, and in a few cases the families hire labor for shepherding the flocks. While off-farm activities include agricultural and non-agricultural works. The forestry Five percent of the total labor force are involved in off-farm activities. The main kind of off-farm activities is in the form of state employment (forest guards, rangers, drivers, forestry fireman, etc.), that accounts for 8 percent of the total population of AQS area.

Households generate their incomes from on-farm (70%) and off farm activities (30%). Horticulture production generates the highest contribution of on-farm income, which accounts for 65 percent compared to about 5 percent from cereal production and about 30 percent from livestock production. The estimated annual average income ranges from 75-100,000 Syrian Pounds. Off-farm income generates about 30 percent of the total family income. Off-farm work include agricultural and non-agricultural activities. Government employees generate an average annual income of 36,000 SP, while landless workers generate about 40,000 SP per year to support their families. Unemployment rate is 30 percent and is considered relatively high in the site, out of which 10 percent for men and 20 percent for women.

2. Conclusions

The main problem facing the inhabitants of the region, particularly those within the protected area, is that of sustainability. This is partially demonstrated by the high level of migration, both seasonal and permanent. The current available land usage for agricultural, grazing or other subsistence activities is insufficient to sustain existing populations and further restrictions will inevitably be applied within the protected area. Of particular note are restrictions on goat herding, which is a primary source of income in the area. Improving relations and greater involvement by the authorities managing the proposed site in regulating and organizing many of the suggested activities, particularly those related to tourism, is essential and would provide much needed local employment opportunities. There is also a need for the involvement of local communities in the management of the protected area especially with regards to the balancing of conservation requirements with their economic needs.

Solutions and Recommendations:

The solutions outlined here have been put to various members of the local community especially identified key stakeholders and their responses and opinions have been noted.

- a) Loan schemes and credit facilities for small businesses such as: beekeeping and honey production, fattening of calves for resale and rearing mixed breed cows would help boost the local economy and raise standards of living. Another idea proposed was keeping silk worms, a traditional product in some parts of this area and discontinued only relatively recently. Reintroducing silkworm production with appropriate training could be very profitable especially where there are pre-existing, Mulberry trees. It should be noted however that similar credit schemes have already been tried out in this and other areas with very mixed results. The most obvious reasons for failure have been noted in previous sections.

- b) Wild herbs and plants such as Zoufa (*Micromaria julian*), thyme, capers etc, are all gathered by the locals in season. Apart from what is kept for personal consumption the rest is sold to dealers and merchants who frequent the area. Developing the sale of these herbs can represent another important and viable source of income. These herbs maybe packaged and sold locally to passing tourist trade, which already frequents the area or to traders and distributors in the nearby towns and cities. In particular, those which are used for making herbal tea, or dried and used in cooking can become very marketable if packaged and presented/marketed appropriately.
- c) A goat exchange program should be encouraged, whereby for every so many goats sold a mixed breed cow may be offered in exchange at a subsidized rate. Although mixed breed cows cost more to keep since they require feed almost exclusively and are more vulnerable to illness, they have a much higher output of milk and more importantly eliminate the need for grazing thus reduce pressure on the habitat.
- d) Providing water for irrigation either through rain traps, cisterns and small dams or wells would greatly improve crop yields and allow for more variety to be cultivated. Most important is tobacco, which is currently cultivated under dry farming conditions, but if irrigated, it could increase output by almost tenfold. The increase in income that could be derived from such a rise in productivity would be substantial enough to have a very marked effect in reducing current dependence on the habitat.
- e) Tourism can become an important alternative source of income by organizing and regulating it since it would increase the level of income generation currently derived from it and protects the habitat at the same time. Designating specific picnic and beauty spots within the protected area would help control tourist access to the forest since they would only be permitted to sit in these specified areas. These special sites or areas should be provided with electricity, toilet and rubbish disposal facilities. Use of fire to cook food should also be regulated whereby only qualified or licensed charcoal grillers would be allowed to light fires in these spots. The tourists/picnickers would then be required to pay the license holder a predetermined fee for the services provided. In return the license holders would be required to maintain, protect and look after their licensed spot and act as litter collectors, fire wardens and guides.

4, Framework for stakeholder participation in decision-making and project implementation

Stakeholder participation during project implementation will be ensured in a number of ways. The project will have two main vehicles for participation in the decision-making process. These comprise “advisory committees of direct resource users” and “project’s sub-steering committees” in each project site. Please, note that while each site will apply this structure for participation, committees’ composition will vary.

The rounds of consultations strongly suggested that resource users whose livelihoods will be affected heavily by the GEF alternative have a formal structure for participation and a direct communication link with the local and international experts involved in the management of the project. This formal and direct participation is even more important when resource users present a relatively high degree of vulnerability, as has been observed in several project sites.

Representative from farmer associations and herder associations are candidates for these committees. Other candidates for these committees comprise representatives from groups engaged in educational or social/organizational activities such as the party youth groups (Shabibah) and the women’s union. Their role can be of particular importance where raising public awareness is an issue both within the stakeholder community and the general public as a whole. Certain key stakeholders from within the community should also be considered as candidates. Often, the latter group is not organized by means of

association or other similar structures. The project will have to undertake an effort either to foster the creation of associations or help the group in selecting candidates that fully represents their interests in the project's decision-making process. The committees might also include representatives from the tourism sector since tourism is expected to play an important role in presenting alternative sustainable means of livelihood.

The "advisory committees of direct resource users" will provide independent inputs into the definition, implementation and evaluation of project activities. As its name indicates, their role would be of an advisory nature and their recommendations would not be binding. However, their recommendations would constitute formal annexes of the project annual review and formal annexes to the minutes of the project sub-steering committee meetings (see next paragraph). This should ensure that the opinions and interests of those most vulnerable enter the project's decision-making process.

In addition to these advisory committees, the project will have sub-steering committees in each project site. These will comprise representatives from the formal structures of government, other stakeholders in each site and at least one member of the "advisory committee of direct resource users". The presence of village leaders within these sub-steering committees would be highly desirable. These committees would provide guidance to project activities, serve as one of the main vehicles for stakeholder input, and review, approve and monitor the quarterly workplan for each project site. Their maneuverability and degree of freedom would be limited by the boundaries given by the overall framework of activities defined by the project document and the National Project Steering Committee.

The objective of having these two types of committees acting simultaneously is two-fold. The first objective is to ensure the participation of stakeholders in the formal project decision-making process (mainly done through the Sub-steering committee). The sub-steering committees are endowed with formal tools to influence the design and implementation of project activities. The second objective is to provide a backup channel ("advisory committees of direct resource users") that can make sure the interest of most vulnerable groups are not diluted whenever sub-steering committees comprise relatively big numbers of participants or present significant power asymmetries. Together, these structures are aimed at ensuring that project management units have access to inputs from all relevant stakeholders, that stakeholders have the tools to participate in project activities, and that the most vulnerable groups are heard and not disproportionately affected by any alternative.

Finally there is a need to set up a monitoring committee, which is able to study and quantify the impact of any program or activity likely to affect stakeholder resources and subsistence. This would then act as an indicator as to whether these programs are having a positive or negative impact on the community which in turn would act as a gauge as to whether the project is succeeding or failing and in which sectors. Members of this committee should be recruited from the national consultants and key decision makers within government. Local stakeholders have been purposely excluded from this committee due to the need for objective analysis.

5. Conclusions

The following general remarks may be applied to all the communities observed in the various regions and habitats covered by this study:

- There is a need for adopting a participatory approach regarding the management of these sites involving the local stakeholders as they are considered primary beneficiaries and their full cooperation is vital for the success of these programs.

- Improving infrastructure in the form of roads, telephones, electricity healthcare facilities and educational institutions all of which would contribute to the improvement of the local quality of life and raise the standards of living in these areas.
- There is a critical need to solve the existing conflicts between the socio-economic values of the local environmentally damaging non sustainable activities such as goat grazing in forest, wood cutting for fuel and charcoal making and the values of biodiversity and environmental preservation.
- Where credit programs have been suggested these should be targeted at the poorest and most needy within the community while doing away with the stringent conditions required of prospective applicants such as providing guarantors etc.
- There is a need to set up a monitoring system which is able to study and quantify the impact of any program or activity, which is likely to have an impact the stakeholders' resources and subsistence. This in turn would act as an indicator as to whether it having a positive or negative impact on the community.

Annex H: Biodiversity Significance

West Asian ecosystems are diverse. The terrestrial ones include Mediterranean forest in the north and sub-tropical mountainous vegetation in the south and southwest. Vast deserts with scant vegetation exist between the northern and southern parts of the region, particularly in the 'Empty Quarter' of Saudi Arabia. Marine ecosystems include extensive coastal areas bordering semi-closed water bodies such as the Persian Gulf, the Mediterranean and the Red Seas, and the open waters of the Arabian Sea. The main marine ecosystems include mudflats, mangrove swamps, sea grass and coral reefs. Large and small rivers in Iraq, Syria, Lebanon and Jordan are the focus of the freshwater ecosystems. Natural freshwater springs are found throughout the region.

The people of this region have traditionally made sustainable use of their natural habitats and conserved biodiversity - for example through the Al Hema system of rangeland protection and by prohibiting hunting during certain months of the year. Screening for genetic improvement was begun on cereals and sheep as long as 10 000 years ago (Ucko and Dimbleby 1969). However, more recently overgrazing, deforestation and hunting have contributed to desertification and the extinction of some native plants and animals. These include the Asian lion, *Panthera leo persicus*, which used to live in the northern parts of the region, but disappeared in 1918 (Kingdon 1990); the Syrian wild ass, *Equus hemionus hemippus*, which disappeared in 1928 (Balouet 1990); and the Arabian ostrich, *Struthio camelus syriacus*, which used to live in Syria and Arabia, but became extinct in the 1940s due to overhunting.

o Biodiversity in West Asia

West Asia's ecosystems are inhabited by numerous species of flora and fauna. Numbers of recorded plant species range from 301 in Qatar (Batanouny 1981) to more than 3000 in Syria (WRI, UNEP, UNDP and WB 1996). Marine algae range from 216 in the Persian Gulf to 481 in the Red Sea (Mohamed and others 1996); there are 21 species of mammals in Kuwait and 92 in West Bank and Gaza; numbers of birds range from 312 in Kuwait to 413 in Saudi Arabia; and reptiles range from 29 in Kuwait to 84 in Saudi Arabia (ACSAD 1997a, WRI, UNEP, UNDP and WB 1998).

The Red Sea and the Arabian Sea are known for the richness of their marine life. There are, for example, more than 330 species of corals, 500 species of molluscs, 200 species of crabs, 20 species of marine mammals and more than 1 200 species of fish (Fouda and others 1998). Marine biodiversity has been badly affected by overfishing, pollution and habitat destruction. As a result, the fish and shellfish harvest has declined in the Persian Gulf (ROPME/IMO 1996).

Many marine species, including Mediterranean monk seals, marine turtles and marine sponges, are threatened by the continuous deterioration of coastal water quality (Lakkis 1996, Tohmé 1996, Environmental Protection Council, Yemen, 1995). Seawater intrusion is also becoming a real threat to coastal ecosystems (AUB 1994, Youssef and others 1994). The extensive exploitation of sand for construction has aggravated the problem of seawater intrusion and destroyed the habitats of many coastal and marine biota, including marine turtles, along the Lebanese and Syrian coasts. Reclamation and infilling of intertidal areas in Bahrain and marshes in countries such as Iraq and Yemen are destroying habitats and jeopardizing their biological diversity (Environmental Protection Council, Yemen, 1995, UNDP 1998).

There are more than 800 endemic vascular plants in the region (Batanouny 1996), 7 endemic mammals and 10 endemic birds (WRI, UNEP, UNDP and WB 1998). The region has 20-23 endemic corals and 17 per cent of the fishes in the Red Sea are endemic (Sheppard and others 1991). More than 30 per cent of plant species are endemic and some 233 of them are threatened, including *Abies cilicica*, Cedars libani and *Juniperus excelsa* in Syria and Lebanon, which are threatened by deforestation. Thirty-two per cent of the plant species in Yemen's Socotra Island

are endemic (Environmental Protection Council, Yemen, 1995). Endemic animal species such as the Arabian leopard *Panthera pardus nimr*, the striped hyena *Hyaena hyaena*, the Arabian tahr *Hemitragus jayakari* and the Arabian wolf *Canis lepus arabs* are also threatened (Kingdon 1990).

Protected areas and national parks have been established in all parts of the region. Examples include the Barouk Cedar Forest, Ehden Natural Reserve and Palm Island Marine Reserve in Lebanon, the Azraq Wetland Scientific Reserve in Jordan, the Umm Qusar Swamp Reserve in Iraq, the Harrat al Harra Reserve, Asir National Park and Al-Jubail Marine Sanctuary in Saudi Arabia, the Arabian Oryx Reserve at Jiddat al Harasis and the Sea Turtle Reserve at Ra's Al-Hadd in Oman, and the Cedar and Fir Reserve in Syria.

The date palm is one of the most important crop plants in the region. The formerly extensive plantations have been drastically reduced over the past few decades as a result of poor irrigation systems, which have led to soil salinization. Urbanization and the introduction of plant pests have also affected the species. The depletion of underground water levels has led to the deterioration and loss of unique freshwater springs and wetlands with their associated flora and fauna.

Over the next decade, urbanization, industrialization, a growing population, abuse of agrochemicals, uncontrolled fishing and hunting, war chemicals and military maneuvers in the desert are expected to increase pressures on the region's fragile ecosystems and their endemic species.

- **Syrian Ecosystems**

Syrian ecosystems are diverse and distinguished by their special geographical location between southern Europe and Asia from one side and northern Africa and Arab Peninsula from the other side. They are located between two world centers of biological colonizations which are the Mediterranean ecosystem with its unique and distinguished Mediterranean sea area and Iranian toranin ecosystem. The terrestrial ones include Mediterranean forest in the north and sub-tropical mountainous vegetation in the south and southwest. Vast steppe with scant vegetation exist between the middle and the east parts of the country.

- **Biodiversity in Syria**

The different topographical, climatic and soil conditions are home to a large number of flora and fauna. It is believed that there are over 3200 species of flowering plants of which 22 are *Pteridophytes*, 10 are *Gymnosperms* and the remaining are *Angiosperms*. There are more than 2500 species of animals of which 62% are insects, 15% birds, 6% reptiles and amphibians, 5% mammals, and the remaining are primarily invertebrates and micro-organisms.

The national country study refers that about 354 bird species have been recorded in Syria, of which between 161 - 194 species breed in the country and 156 are migratory, either passing through or wintering. At least 21 bird species are considered threatened (11 globally and 10 regionally according to the IUCN Red List) as Cinereous Vulture (*Aegypius-monachus*), Syrian Serin (*Serinus syriacus*), Golden Eagle (*Aquila chrysaetos homeyeri*).

This number may prove to be much higher once ornithological studies are initiated in Syria to survey this major flyway of the Western Palearctic and critical resting stop for migrating birds particularly the birds of prey.

The large mammals of Syria suffered more than any other group of animals through loss of habitat, competition from grazing sheep and goats, and uncontrolled hunting. Early Arab and

western travelers in Syria, during the 18th and 19th centuries, were still reporting on extensive herds of Reem gazelle, Syrian onager and Arabian ostrich. Those observers also told of seeing cheetahs and leopards that depended on the abundance of gazelles and onagers as their primary source of food.

Today those herds of gazelle, onagers and ostrich are entirely gone from the Syrian badia.

Syria has 16 legislated protected areas in the form of nature reserves from different ecosystem, and hence one of the lowest percentages of protected areas to total land area of any country in the Mediterranean region. According to Syrian statistics the percentage is 0.6%, whereas according to international surveys it stands at 0.0%. That figure should be around 10% meaning that about 10% of the area of Syria should be allocated to protected areas.

The establishment of more protected areas is critical because Syria has very few such areas at the present time and according to the Biodiversity Convention it is committed to increasing the protected area.

The Syrian Arab Republic joined the Convention on Bio-diversity, Joining of the Convention came as a result of the awareness of the basic values of biodiversity as well as the ecological and genetic value and the social, economical, scientific, educational, cultural, recreational and artistic values.

Syria also had signed and ratified a number of important international conventions and agreements related to the conservation of biodiversity such as:

- Ramsar Convention on Wetlands.
- World Heritage Convention for Cultural and Natural Sites.
- Specially Protected Areas in the Mediterranean .
- Convention on Combating Desertification.

It is expected to prepare all official steps to sign and ratify the following conventions and agreements, which help in implementation of necessary procedures to protect biodiversity components:

- Convention on the International Trade in Endangered Species CITES.
- Convention on conservation of Migratory Species(CMS).
- African Euro-Asian Water-Birds Agreement (AEWA).
- Cartagena Protocol on Biosafety.

In 1998 the Biodiversity Unit at the Ministry of Local Administration and Environment published a comprehensive and well researched Country Study of Biological Diversity in the Syrian Arab Republic. The 367 page document represents the efforts of about two hundred from universities, Ministries and research centers, as well as various economic and community based organizations.

The Biodiversity Unit also prepared the National Strategy and Action Plan on Biodiversity and on 13 / 5 / 2002; The Supreme Council for Environmental Safety ratified it.

○ **Globally significant biodiversity of Syria**

The world Conservation Monitoring Centre Publish the IUCN red list of threatened animals in Syria which include:

class Mammalia

order Chiroptera,

Family Rhinolophidae (Rhinolophus blasii, R. euryale, R. ferrumequinum,)

Family Vespertilionidae (Miniopterus schreibersi, Myotis myotis,)

Order Carnivora,

Family Felidae (*Acinonyx jubatus*, *Panthera leo persica*,)

Family Phocidae (*Monachus monachus*,)

Order Perissodactyla,

Family Equidae (*Equus hemionus hemippus*,)

Order Artiodactyla ,

Family Bovidae (*Capra aegagrus*, *C.apra nubiana*, *Gazella gazelle*, *Gazella gazelle gazelle*,
Gazella saudiya, *Gazella subgutturosa*, *Gazella, subgutturosa marica*, *Oryx leucoryx*,)

Order Rodentia ,

Family Sciuridae (*Sciurus anomalus*,)

Family Dipodidae (*Allactaga euphratica*,)

Family Muridae (*Calomyscus tsolovi*, *Chinomys nivalis*, *Mesocricetus auratus*,) Family

Myoxidae (*Dryomys nitedula*, *Eliomys melanurus*,)

Class Aves,

Order Pelecaniformes ,

Family Plicanidae (*Pelecanus crispus*,)

Order Ciconiformes,

Family Threskiornithidae (*Geronticus eremite*,)

Order Aneseriformes ,

Family Anatidae (*Marmaronetta angustirostris*, *Oxyura leucocephala*,)

Order Falconiformes ,

Family Accipitridae (*Aegyptius monachus*, *Circus macrourus*,)

Family Falconidae (*Falco naumanni*,)

Order Gruiformes ,

Family Rallidae (*Crex crex*,)

Family Otidae (*Otis tarda*,)

Order Charadriiformes,

Family Glareolidae (*Glareola nordmanni*,)

Class Reptilia,

Order Serpentes,

Family Viperidae (*Vipera bronmulleri*,)

Order Testudines,

Family Emydidae (*Emys orbicularis*,)

Family Testudinidae (*Testudo graeca*,)

Family Trionychidae (*Rafetus euphraticus*, *Trionyx triunguis S*,)

Class Amphibia ,

Order Anura,

Family Discoglossidae (*Discoglossus nigriventer*,)

Class Avtinopterygii,

Order Clupeiformes,

Family Clupeidae (*Alosa fallx*,)

Order Cypriniformes ,

Family Balitoridae (*Nemacheilus angorae*,)

Order Atheriniformes,

Family Atherinidae (*Atherina boyeri*,)

Order Cyprinodontiformes,

Family Cyprinodontidae (*Aphanius fasciatus*,)

Order Syngnathiformes ,

Family Syngnathidae (*Syngnathus abaster*,)

Class Insecta,

Order Coleoptera,

Family Cerambycidae (*Rosalia alpine*,)

Order Lepidoptera ,

Family Papilionidae (*Archon apollinaris*, *Parnassius Apollo*,)

Family Sphingidae (*Hyles hippophaes*, *Proserpinus proserpina*,)

Order Odonata,

Family Calopterygidae (*Calopteryx syriaca*,)

The three sites were selected according to their national, regional and global importance. They cover the Syria's most globally significant biodiversity, including flora and fauna.

1- The ecosystem of the Abdul Aziz site:

The ecosystem of the Abdul Aziz site is composed of steppe vegetation with dominance of scattered woody elements. Trees form the upper story of the plant community while other herbaceous species form lower strata. Major woody species include *Pistacia atlantica*, *P. khinjuk*, *Amygdalus orientalis*, *Prunus microcarpa*, *Pirus syriaca*, *Crataegus azarolus*, *Rhamnus palaestina*. Biannual species present in the site are *Artemisia herba-alba*, *Noea mucronata*, *Salsola vermiculata*, *Achillea sp.* *Phlomis sp.* and *Thymus syriacus*. A number of annuals are present too. Herbaceous vegetation grows mainly in springtime due to extreme high temperature in summer and extreme minimum temperature in the winter.

Phytosociologically, *P. atlantica* is the dominant species in *Pistacietum atlanticae* which is well developed only in the northern Syrian desert (Jabal Abdul Al Aziz) where a considerable climax viable population exist compared to isolated individuals in other areas of the region (Zohary 1940). *Pistacia atlantica* here has a wider leaf which may represent a unique transitional forms to *P. mutica*.

P. khinjuk is the other major component of vegetation (nearly 60%) in the protected area with various ecotypes. The species occurs naturally only in this site in Syria and perhaps isolated population are scattered in northern Iraq and in south east Turkey.

- **The main associations present in the mountain of Abdul Aziz:**

Main associations present in the mountain according to Sankary (1982) and Kadi (field work 2001) include:

1. Pistacieto – Agropyroetum: This association is very rich in species and composed mainly of *Pistacia atlantica* and *P. khinjuk* as woody species with some herbaceous elements such as *Poa bulbosa*, *Dactylis glomerata*, *Stipa* spp., *Teucrium polinum*, and *Thymus syriacus*. It is mainly concentrated in Badeeh area and scattered in various locations of the mountain.
2. Crataego – Artemisietium: Main components of this association includes *Pistacia atlantica*, *Pistacia khinjuk*, *Crataegus azaralus*, *Prunus microcarpa*, *Artemisia herba-alba*, *Avena barbata*, *Papaver* spp., *Ziziphora Abd-el-Asissii*, *Mathiola oxycera*. It is found basically on northern slopes
- 3- Atriplexeto – Salsoletum: This association was described in Albadii. Main components are *Pistacia atlantica*, *Atriplex leucoclada*, *Salsola villosa*, *Poa bulposa* and *Haloxylon articulatum*.

- **Global significance :**

The Jebel has a remnant of forest/steppe associations. These associations represent the nearest living examples to Neolithic sites along the Euphrates some 160 kms to the west where fruits and charcoal of these species were common. Although *P. khinjuk* is present in Iraq, Iran and Turkey, it represents a viable well-preserved population **with good genetic pools of various species** in the Abdul Aziz Mountain, which deserve protection and management.

Nearly 200 species were mentioned in bibliography of the area and/or listed in present fieldwork, are found in the site. Seven of them are endemic to Syria including, *Allium karyateini* Post, *Astragalus chlorostegius* Boiss. et Hausskn., *Astragalus megaloceras* Sam., *Echinops descendens* Hand.-Mazz., *Onobrychis pinnata* (Bertol.) Hand.-Mazz., *Satureia pallaryi* Thieb., *Scutellaria cretacea* Boiss. et Hausskn.

- **The economical and ecological importance. Of the Abdul Aziz site:**

The Abdul Aziz site includes a number of species that have an economical and ecological importance. Of these we mention:

- (1) Genetic resources of fruit trees, that provides vigorous and resistant stock material for cultivars grafting and tolerance to drought and cold with ability to thrive in poor soil conditions. Of these are: *Pistacia atlantica*, *Pistacia khinjuk*, and *Amygdalus orientalis*. Many other species such as *Prunus microcarpa*, *Crataegus azarolus*, *Ficus carica* and *Rhamnus* spp. have similar features.
- (2) Excellent protein rich forage species that can be used for rehabilitation of degraded ecosystems are present in viable populations. Of these we may mention *Atriplex leucloda*, *Avena barbata*, *Dactylis glomerata*, *Salsola villosa*, *Stipa barbata*, *Aegilops* spp., and *Vicia* spp. Around 20 species were collected from the site by ICARDA.
- (3) Medicinal plants are present in prosperous populations. These species are collected and sold in local markets. Some of these species are: *Thymus syriacus*, *Artemisia herba-alba*, *Capparis spinosa*, *Teucrium polinum*, *Achillea* spp., *Ziziphora* spp., *Papaver* spp. and *Alcea rufescens*.
- (4) Ornamental species adapted to dry zone such as *Gladiolus aleppicus*, *Ixiolirion tataricum* and *Tulipa Montana* are found too.

- **The wild animals and the globally threatened species**

The Abdul Aziz site harbors a number of wild animals. These include 25 species of mammals, 51 species of birds and quite number of reptiles and insects. There are 12 globally threatened species in the site including, Fox (*Vulpes vulpes syriacus*), Wild Cat (*Felis catus*), Egyptian Vulture (*Neophron percnopterus*), Black Vulture (*Aegyptius monachus*), Griffon Vulture (*Gyps fulvus*), Black Francolin (*Francolinus francolinus*), Golden Eagle (*Aquila chrysaetos*) and White Stork (*Ciconia ciconia*).

- **The globally endangered species**

Twenty-six globally endangered species exist in the site. Of these we may mention: Wolf (*Canis lupus*), Striped hyena (*Hyanea hyanea*), Badger (*Meles meles*), Nubian Ibex (*Capra ibex*), Short-toed Eagle (*Circetus gallicus*), Lanner Falcon (*F. biarmicus*), Houbara (*Chlamydotis undulata*) and Little bustard (*Tetrax tetrax*).

In addition, a number of rare animals appear in different times of the year in the site

2-The ecosystem of the Fronloq area

- **The main associations present in the mountain of the Fronloq:**

five associations (assemblages) have been noted in the Fronloq site. These are:

1- Chaerophyllo-Quercetum pseudocerridis (35 50 32N, 36 00 10E-590m): Main species of this category is the *Quercus cerris* subsp. *pseudocerris*, which has an abundance of 5.5 (Braun-Blanket scale) and coverage of 85-100%. Height of trees is 20-25m. Associated species that distinguish this association include, *Digitalis ferruginea*, *Cicaea cepaea*, *Chaeriphyllym libanoticum*, *Lathyrus libani*, *Silene confertiflora* and *Euphorbia macrostegia*.

2- Cerco-Ferulagetum autumnalis (35 50 42N, 35 58 12E-660m): In this assemblage *Q. cerris* subsp. *pseudocerris* has an abundance value of 4.4 and 75-85% coverage. Heights of trees are 16-19m. Associated species (mixed tree assemblages) that distinguish this association are: *Cercis siliquastrum*, *Pinus Brutia*, *Rhus cotinus*, *Juniperus oxycedrus*, *Ferulago autumnalis* and *Celsia heterophylla*.

3- Alysso (crenulatae)-Quercetum pseudocerridis: *Q. cerris* subsp. *pseudocerris* and *Pinus brutia* with abundance values of 3.4 and 3.3 respectively. Tree heights are 8-15m. Coverage does not exceed 75%. Major species that distinguish the association are: *Centaurea arifolia*, *Alyssum crenulatum*, *Euphorbia cassia* and *Thymus cilicicus*.

4- Pineto (brutia)-Quercetum pseudocerridis (35 51 11N, 36 00 54E): This association represents a degraded stage of original cover. The following species distinguish this association: *Pinus brutia*, *Q. cerris* subsp. *pseudocerris*, *Aster amani*, *Fumana oligosperma*, *Spiranthes autumnalis*, *Genista anatolica*, *Erica verticillata* and *Styrax officinalis*.

5- Saliceto (libani)-Smilacetum excelsae (35 51 21N, 36 03 34E-450m): This association represents vegetation present along springs and watercourses. It contains a large number of endangered species. Major species of this category include, *Eupatorium cannabinum*, *Smilax excelsa*, *Salix libani*, *Aster amani*, *Scilla bifolia*, *Polypodium vulgare*, *Corylus avellana*, *Mespilus germanica*, *Alnus orientalis*, and *Cornus mas*.

- **Global significance:**

The Fronloq area contains two ecosystems with gradual transition from one to the other. Deciduous trees are concentrated in the middle of the protected area with penetration into surrounding Brutia pine forests. The site contains few openings and roads. The roads function as fire lines (fire breaks). It should be noted here that the site (4500ha.) had no paved roads at all until 1942 when Kassab-Lattakia road (western border) was paved. In 1970, Fronloq-AI-Rabeeha

road was paved too. The northern border road was paved in 1988. It should be noted here that roads in general affect biodiversity by fragmenting habitats and creating edge effects. Paved roads increase fauna roadkills and affect animal behavior too. In the site many unpaved roads were opened within the last ten years to function as fire breaks. Off course, these roads increase human access to core area, which may damage biodiversity.

Ecologically speaking, the protected Fronloq area falls within the Eu-Mediterranean to the Upper Mediterranean vegetation zones. Along with the microclimatic features of the proposed protected area, topography and soil properties play an important role in determining species associations and species occurrences. As such, these factors, especially the last two, contributed to the appearance of the poly climax vegetation in the area, where various forest assemblages can be seen (Nahal 1974).

The core area of the Fronloq site (35 50 32N, 36 00 10E-590m) is composed of pure deciduous trees of *Quercus cerris* subsp. *pseudocerris*, where it dominates the forest.

Major associated species of *Quercus pseudocerris* in these sites include, *Alnus orientalis*, *carpinus orientalis*, and *Styrax officinalis*. *Quercus pseudocerris* trees mingle with Brutia pine trees *Pinus brutia* on south and eastern slopes and on shallow soils (GORS/UES 1991).

The other major species in the protected area is *Pinus Brutia*, which is a widespread species in the East Mediterranean sea. The species belongs to the Eu-mediterranean bio-climatic zone. However, It is found in Syria on different strata occupying altitudes from sea level to about 700m.

- **The economical and ecological importance. Of the Fronloq site:**

A large number of species have economical importance such as *Crataegus monogyna*, *Digitalis ferriginea*, *Fraxinus ornus*, *Laurus nobilis*, *Lavandula stoechas* and *Pistacia palaestina* ...etc.

Due to its geographic location, the Franloq site constitutes a bridge between southern Europe and Asia Minor for migratory wildlife species that cross the area. Furthermore, the site is one of the stop over points for globally endangered and migratory birds. Of these are: Black vulture (*Aegypius monachus*), Golden eagle (*Aquile chrysaetos homeyeri*) and the Crane (*Grus grus*) (UNEP/MLAE 2000, Wolfgang 1995).

- **The wild animals and the globally threatened species**

A number of globally endemic and endangered species in Syria in particular and Middle East in general reside in the Fronloq site. These include, Syrian serin (*Syrinus syriacus*), Syrian woodpecker (*Dendrocopos syriacus*) Finsch's wheatear (*Oenanthe finschii*), Masked shrike (*Lanius nubicus*), Wolf (*Canis lupus*), Roe deer (*Capreolus capreolus*) and tiger salamander (*Salamandra salamandra*) (UNEP/MESA 2000, Wolfgang 1995). The Fronloq site host's quite number of rare and endangered animal species. Of these; 16 globally threatened species (GTS), which include, *Canis lupus*, red fox (*Vulpes vulpes*), follow deer (*Dama dama*), *Aquile chrysaetos homeyeri*, and European roller (*Coracias garrulous*);

- **The globally endangered species**

12 globally endangered species (GES), which include, Badger (*Meles meles*), striped hyena (*Hyanea hyanea*), Jackal (*Canis aureus*), chukar (*Alectoris graeca sinaica*), *Oenanthe oenanthe*, Eagle owl (*Bubo bubo*) and sparrow hawk (*Accipiter nisus*). In addition a number of rare insect species such as *Lucanus cervus*, *Iphiclides podalirius*, and *Papilio machaon* are found (Asswad 1998, Zakary 1983, UNEP/MLAE 2000).

2- The ecosystem of the Abou-Qubies area

- **The main associations present in the mountain of the Abou-Qubies:**

Ecologically speaking, the Abou-Qubies site has the three variants of the bio-climatic zones, which favor spread of many species. In addition, due to its micro-climatic conditions and favorable climate the site is rich in species. The number of species in the protected area is estimated at 350 with perhaps 6 of endemic species. The site also harbors around 25 rare species most of which are started the downward trend. In addition the area contain 20 are rare or endangered species. Since no studies have been conducted in the area, these figures are merely an educated guess.

Physiognomically, The Abou-Qubies site ecosystem is composed of a mixture of evergreen sclerophyllous forests and deciduous forests. Basic components of the evergreen forests is *Quercus calliprinos* (umbrella species) and additional number of secondary woody species such as *Q. infectoria*, *Arbutus andrachne*, *Pistacia palaestina*, *Phillyrea media*, *Laurus nobilis*, *Cotinus coggyra*, etc... These types of forests form a climax community of generally of more than 4m in height. They are found on shallow soils and drier sites on basically southern and eastern slopes (35 14 35N, 36 12 36E-875m). Once disturbed (grazing, cutting, clearing,) retrogression succession starts and leads to secondary plant communities. These secondary communities are composed of maqui of different degraded stages. Various types of maquis are recognized (Abido 2000, GORS/UES 1991) most importantly are:

The protected area contains various elements of the Mediterranean flora and some of the Irano-Turanian elements. Of the hot variant of Mediterranean bio-climate zones few species occur. Most of which are threatened. *Ceratonia siliqua*, *Olea europea* and *Myrtus communis* are major ones in this category. Species found in the Eu-Mediterranean zone are: *Pistacia palaestina* (= *P. Mutica*), *Quercus calliprinos*, *Laurus nobilis*, *Spartium junceum*, *Acer syriacum*, *Juniperus oxycedrus*.

Major species found in the mountain bio-climatic zone of the site are: *Quercus calliprinos*, *Carpinus orientalis*, *Fraxinus ornus*, *Q. pseudocerris*. Natural and man-made Brutia pine stands are present in the site too.

One point to mention here is the series of fire lines and unpaved roads present in the area, which enlarge if they are extensive, the edge effect. The most notable one is the firebreaks that cut through the protected area from Ali-Mejdel site in the south to Tamazeh in the north.

- **Global significance :**

The importance of Abou Qubies protected area comes from its geological, geo-morphological and biological structures. The ecosystem in the area is considered unique in its assemblages of species, which creates habitats sheltering various forms of fauna. Site importance are highlighted in the following points:

It is estimated that the total number of species in the site is about 350. Most of which belongs to the Mediterranean flora, especially to eastern Mediterranean. This site is one of the spots in the coastal mountains that are very rich in biodiversity that have an economical importance (genetic resources).

The number of endemic species is 6 including, *Iris nusairiensis*, *Origanum bargyli*, *Salvia rubifolia*, *Malus trilobata* and *Daphne libonatica*.

About 20 species are considered rare or endangered. Of these are *Ceratonia siliqua* and *Acer syriacum*. In addition, the site harbors a number of species that have an economical and ecological importance.

Olea europea var. *sylvestris*, *Pirus syriacus*, *Amygdalus communis*, *Crataegus* spp. and *Malus sylvestris* are among the species that have intra genetic diversity.

Agro biodiversity includes species of *Trifolium* (more than 10 species), *Medicago* (6 species), *Vicia* (7 species), *Lathyrus* (5 species) and other leguminosae (*Astragalus*, *Lens*, *Pisum*, *Onobrychis* and *Ononis*.). A large number of gramineae members exists in the site including, *Triticum* spp., *Aegilops* spp., *Hordeum* spp. and *Avena* spp...

Medicinal plants include (*Thymus syriacus*, *Capparis spinosa* and *Matricaria* sp. ...)

The Abou-Qubies site is very rich in ornamental and landscape species such as *Iris* (5 species), *Tulipa* (2 species), *Orchis* (4 species), *Ophris* (4 species), *Cephalanthera* (3 species), *Gladiolus* (1 species), *Asparagus* (2 species), *Fraxinus* spp., *Laurus nobilis*, *Ruscus aculeatus*, *Acer* spp., *Hedra helix* and *Spartium junceum*.

- **The economical and ecological importance. Of the Abou-Qubies site:**

- **The wild animals and the globally threatened species**

On the fauna side of biodiversity, site importance are highlighted in the following points:

It is a cross road for migratory species and home for many other resident ones.

It harbors endangered species that have global and regional importance. A number of endemic and endangered species present in the site including, Syrian Serin (*Serinus syriacus*), Black bird (*Turdus merula syriacus*), Wolf (*Canis lupus*), Roe Deer (*Cervus dama*), Hyrax (*Psoracia syriacus*), Grey Hamster (*Cricetulus migratorius cinerascens*) and Tiger salamander (*Salamandra salamandra*).

There are 12 globally threatened species (GTS). These include, Fox (*Vulpes vulpes syriacus*), Wild Cat (*Felis catus*), Wild Boar (*Sus scrofa*), Black Vulture (*Aegyptius monachus*), Hamerkop (*Scopus umbretta*), Black Francolin (*Francolinus francolinus*), Golden Eagle (*Aquila chrysaetos*) and Hoopoe (*Upupa epos*).

- **The globally endangered species**

A number of globally endangered species are found including, Lesser kestrel (*Falco naumanni*), Striped hyena –(*Hyanea hyanea*), Badger (*Meles meles*), Goldfinch (*Carduelis carduelis*), Jay (*Garrulus glandarius*), Great Tit (*Parus major*) and Eagle Owl (*Bubo bubo*). The following butterflies are endangered: *Parnasius apollo*, *Hyles hippophaea* and *Acherontia atropos*.

Rare animals too are present in the site. These include; Jackal (*Canis aureus*), Mongoose (*Herpetc ichneman*), Weasel (*Mustela nivalis*), Roe Deer (*Capreolus capreolus*), Quail (*Coturnix coturnix*), Hobby (*Falco subbuteo*), Hen Harrier (*Circus cyaneus*).

Annex I: Site selection

Identification, assessment and preliminary short-listing of candidate sites were undertaken in conjunction with the National Consultant team. Site selection was carried-out in four phases:

- i. Development of a set of qualitative and quantitative site selection criteria,
- ii. An initial identification and review of sites nominated by the National Consultant team and mission participants (more than 21 sites)
- iii. Selection of thirteen sites according to quantitative criteria
- iv. Short-listing of five sites according to qualitative criteria.

The qualitative criteria used were:

CRITERIA	POINTS ALLOCATED
Site mentioned in Biodiversity Strategy & Action Plan (NBSAP)	1
Site mentioned in National Environmental Action Plan (NEAP)	1
Site mentioned in National Country Study	1
Site is legislated as a Protected Area/ Reserve	2
Site of special Government or National interest	1
Total for National Criteria	6
Unique Ecosystem	2
Endemic Biodiversity (1-5 spp.= 1 point, more than 5 spp.= 2 points)	2
Migratory Route	2
Presence of Globally-Threatened / Globally-Endangered Species	2
Diverse Ecotopes	2
Agro-biodiversity value	2
Site of special interest to International Conventions/ Agencies (e.g. listed by Ramsar, UNESCO MAB)	2
Total for Global Criteria	14
Total points	20

Using the above criteria thirteen sites were selected, which are listed below along with the national, global and total scores obtained. The final column records significant issues raised during discussions, particularly factors which may discount the site in question (in yellow).

Site	National	Global	Score	Notes
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Site	National	Global	Score	Notes
Fronlok complex	6	13	19	Consists of 3 reserves in a coastal area near Latakia
Jebel Abdul Aziz	6	13	19	One of the most prominent sites in Syria
Jaboul Salina	6	10	16	Agro-chemical pollution threat unmanageable
Abu Qbais	5	11	15	NB: Close to WB site, but ecologically dissimilar
Allazab/ Qalamoun	3	12	15	Potentially better as a regional project with Lebanon (site is at the border)
Jebel Al Arab	4	11	15	Overlap with Agro-biodiversity project
Al-Lajat Reserve	4	11	15	
Abu Rajmain	4	11	15	Mountain ecosystem similar to Jebel Abdul Aziz
Sabkhat Muh	4	10	14	Wetland site (seasonal)
Jebel Balais	5	8	13	Mountain ecosystem similar to Jebel Abdul Aziz
Shaiara Sharqieh	4	9	13	Restricted military (missile) site
Al Thawara/ Azad	7	5	12	Transboundary pollution threat from the river
Samaan Barakat	3	7	10	

Qualitative criteria were then applied, including:

NB: Criteria in italics were not widely applied

1. Complementarity in ecosystems (no overlaps in ecosystems)
 - a. Complementarity with World Bank project (avoid similar ecosystems)
 - b. Complementarity with UNDP Agrobiodiversity project sites
 - c. Avoid excessive overlap with other donor-funded project sites (e.g. Italian-funded FAO project at Al-Taleela)
2. Threats and problems
 - a. Unmanageable threats/ major threats outside the systems boundary
 - b. Transboundary threats and issues
 - c. Expected scale of threats – not too few or too many
3. Size – not too big or too small for a viable project/ biodiversity conservation site
4. *Geographical distribution – attempt to cover a broad area of the country without creating too much difficulty for project management and coordination*
5. *Degree of donor interest/ probable interest in co-financing*
6. *Baseline situation: degree of baseline activities/ baseline funding in place at the site.*
7. *Socioeconomic factors*
 - a. *Socioeconomic condition and nature of development in the site area (expected scale of alternative livelihood requirements)*

- b. Response of local communities/ stakeholders, and degree of support shown.*
- 8. Environmental services and values of the site, e.g. water catchment area, etc.*
- 9. Socio-cultural, historical and religious values/ significance of the site.*
- 10. Future potential: anticipated future development interest/ potential of the site*

Using these qualitative criteria a short-list of five candidate sites was drawn up:

1. The Fronloq complex
2. Jebel Abdul Aziz
3. Sabkhat Muh Salina
4. Abu Qbais
5. Al Lajat Reserve

These sites, and the methods used to select them, were presented to and endorsed by a National Workshop and the National Steering Committee on 18 February. The National Consultant team is presently compiling detailed site profiles of these sites, to assist in selecting three sites for inclusion in the full project. The International and National Consultants subsequently conducted a final site selection based on these site profiles as well as field visits to all five short-listed sites.