



Global Environment Facility

MOHAMED T. EL-ASHRY
CHIEF EXECUTIVE OFFICER
AND CHAIRMAN

August 11, 2000

Dear Council Member:

UNDP, as the Implementing Agencies for the project, *Morocco: Transhumance for Biodiversity Conservation in the Southern High Atlas*, have 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 December 19999 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 reviewer 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 UNDP or the World Bank to down load 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,

cc: Alternates, Implementing Agencies, STAP



United Nations Development Programme
GLOBAL ENVIRONMENT FACILITY (GEF)



2 August, 2000

Dear Mr. El-Ashry, *Mohamed:*

Subject: MOR/99/G33/A/1G/99 – Transhumance for Biodiversity
Conservation in the Southern High Atlas

I am pleased to enclose the project for Morocco entitled “Transhumance for Biodiversity Conservation in the Southern High Atlas” approved by the GEF Executive Council in December 1999. Also enclosed is the response to comments provided by Council members.

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

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

Yours sincerely,

Rafael Asenjo
Rafael Asenjo
Executive Coordinator

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RESPONSE TO COUNCIL MEMBERS COMMENTS

Respond to comments from Germany:

1. CBD and CCD Synergy: This comment is addressed in the first paragraph of page 7 of the project document.
2. German project on Protection of Natural Resources: addressed as part of the 5th paragraph on Page 8 of the project document.
3. Genetic Diversity of Native Livestock: We agree with the Council Member's comment related to the conservation of genetic diversity of native livestock as being extremely difficult. We herewith like to emphasise that there will be no conservation activities planned in context of this project, but an inventory and certification of endemic breeds of domestic animals that will be incorporated later into national conservation programs. The justification for this activity stems from the fact that biodiversity of the High Atlas is partly a result of co-existence of domestic livestock with natural biodiversity. While domestic biodiversity suited to the High Atlas ecosystem is significantly high, the rate of its genetic pool erosion is also high. Already, such a gene pool has been substantially reduced in the northern Mediterranean zones. Of particular concern is the agrobiodiversity of domestic sheep and goats. The Atlas is the traditional reservoir of several mountain breeds of sheep, including the highly heterogeneous Dman, the mountain Timahdite, and steppe breeds such as Sardi, and Beni Guild. Among the goats, the North African "Rameau" and Mzabite with black thick hair are very adapted to this area and resistant to environmental stress. The local breed of cattle (*tidili*) also is rare to find as they have been crossed extensively with imported races, particularly Holstein.
4. Unfortunately, so far, there is not an authentic inventory and classification of local animal breeds in the High Atlas. ANOC, which is a national NGO, is currently undertaking a successful conservation program concerning native and pure races of domestic animals. ANOC will assist the project in the inventory and classification of native races of domestic sheep and goats so that once these breeds are identified, ANOC will include the herders in the project zone into its national conservation program.

Respond to comments from France Council Member

5. Project viewed within a general context of local development by placing pastoralism within the context of other activities causing biodiversity degradation. We concur to the observation made by the Council Member from France referring to pastoralism in a larger context of activities causing biodiversity degradation. During the PDF-B, there has been extensive participatory discussions and analysis looking at the baseline, and the threats/root causes affecting rangeland biodiversity in the High Atlas. The project will specifically be addressing the threats of chaotic settlements, overgrazing/undergrazing, over-hunting of endemic mammals and tourism through a holistic ecosystem approach employing transhumance as a biodiversity-friendly tool for biodiversity conservation and sustainable development. In addition, Government and donor interest in enhancing the development and protection of rangeland and forest biodiversity have resulted in various initiatives and projects in the High Atlas and the buffer zones, all of which are contributing to the sustainable development baseline (see section A3 of the project document).

Comments from Switzerland:

6. Project timelines: The sequence of project activities and timelines for interventions are described in the project document as part of the workplan. The fifteen-page limit on the project brief has not enabled the team to be more descriptive.

Comments from the Netherlands:

7. Government Commitment: We agree with the comment made by the Netherlands Council Member regarding the imperative role of the government commitment in achieving project objectives. The Government commitment and ownership to this project, while impressive, remains to be a risk, which in fact was highlighted in the project brief and the project document. The role of the GoM and the local populations during project formulation and PDF-B implementation were an important indication of the importance of the High Atlas project at the national and local agenda, and of the project's political and financial sustainability. We would like therefore to highlight the GoM's firm commitment to provide cost-sharing contributions to support the project. The first tranche of these contributions is already available and the Ministry of Agriculture is eager to start the project. In addition, the government recently has indicated willingness to increase its national contributions to the project, which implies an additional firm commitment.

8. Population pressures: We do not see population as a pressure in the project zone. In fact, according to the 1995 census, the overall population density is low in the Province of Ouarzazate (24 people/km² and 24ha/animal unit). However, we see sedentarization of Bedouin communities is tacitly allowed by local authorities, due to insufficient capacity to control it, to be detrimental to transhumance. The project strategic philosophy adopted is that people can settle, in appropriate sites, as long as their livestock keep moving, and farming system is done sustainably. Baseline activities and populations intensification are not contradicting the project's philosophy, but must be tempered through zoning and land use planning to reduce their negative environmental effects, and must be balanced with additional incentives for extensive livestock production.

9. Agro-ecological zones: We would like to highlight herewith that the zoning and land use planning negotiated through participatory decisions will channel intensive agriculture into suitable biodiversity-friendly agro-ecological zones and will relieve pressure from common range resources in both midland and highland ecosystems. Sensitive and vulnerable habitats and nesting sites in the midlands and highlands will be selected and set aside for protection also through participatory decisions.

10. Revolving Funds: We would like to thank the Council Member for the comment raised on the revolving fund and the bee keeping activities, and their social and economic viability. Herewith, we would like to emphasize that these activities among many others have been substantially discussed and agreed upon with all customary leaders and government officials and experts during the PDF-B implementation period. These stakeholders were not only consulted, but also asked to make key decisions regarding project outputs and objectives especially the activities (and their success and sustainability) with direct national benefits such as the revolving fund and bee keeping.

11. The project will supervise and monitor closely the undertaking of these activities and will assist the concerned stakeholders in the project site in how to manage these activities. Discussions, during development/negotiations of project activities, revealed the presence of locally managed trials with grazing fees in improved pasture in Morocco. These trials were considered to establish basis for economic viability of a revolving fund, which is replenished by grazing fees. In addition, demand for honey production in Morocco encourages local beneficiaries to invest in bee keeping activities, thereby ensuring viability. Co-financing capitalized by 50% UNDP and 50% local membership fees, user fees, receipts, etc will secure core resources for the revolving fund to complement land use planning and natural resource management. This comment is addressed in page 36 of the project document as part of the risks and assumptions.

12. Adjacent protected areas: We agree with the Council Member's comment related to the project links with adjacent protected areas such as the GEF/WB-GoM Protected Areas Management Project. This project will complement and build on synergies provided by the GEF/WB project, especially with respect to exchanging data on biodiversity, management experiences, and best practices suited to the protection of endemic and/or threatened biota in the High Atlas (see Annex G). In terms of geography, the Toubkal national park, which is the site for the GEF/WB-GoM project occurs in the western High Atlas, 100 km west of the project site. The Ministry of Forestry and Water's Natural Resource Conservation Department, which is overseeing the implementation of the GEF/World Bank project, is a member of the project's National Coordination Committee, and will oversee the implementation of the conservation related activities through its decentralised offices in Ourazazate (DREF). The Oriental Park, which is proposed in this project, occurs in the eastern High Atlas, 100 km east of the project site, partially includes the traditional territory of at least 37 Aït Atta pastoral villages. It also offers a remote and rough sanctuary for many mammals, including the last remaining panthers in Morocco. Activities proposed under this project will be complementary to Toubkal National Park project. This comment is addressed in various places of the project document, in particular in pages 9, and 20 under project strategy and implementation arrangements.

13. Fire: Though fire is usually a dominant actor in the arid areas, it was not found to be a threat in the project zone and that is why it has not been addressed in context of this project.

UNITED NATIONS DEVELOPMENT PROGRAMME
Project of the Government of Morocco

PROJECT DOCUMENT

Project Number: MOR/99/G33/A/1G/99
 Project Title: Transhumance for Biodiversity Conservation in the Southern High Atlas
 Duration: 7 years
 Project Site: Ouarzazate
 National Implementing Agency: Ministry of Agriculture
 Executing Agency: Ministry of Agriculture
 Estimated starting date: August 2000

Classification Information

ACC sector and sub-sector: 0430 Biological Resources

DCAS sector and sub-sector: Agriculture, Forestry and Rangelands, Research and Development (0527)

Primary areas of focus/sub-focus: Promoting Environmental and Natural Resources Sustainability (03)

Secondary areas of focus/sub-focus: Improvement of data and information on sustainable development (0317)

Primary target beneficiaries: Local Communities and NGOs (06)

Secondary target beneficiaries: Local Governmental Organizations (0539)

Summary of GEF, UNDP and Cost Sharing inputs

GEF Inputs:	US\$4,369,400 (Incl. PDF)
UNDP Inputs:	US\$ 500.000 (2000-2001)*
Government Input:	
in kind	US\$ 850,000
in cash	US\$ 1,860,000
Local Input:	
in kind	US\$ 1,275,000
in cash	US\$ 165,000
parallel-funding:	US\$ 737,000
<hr style="width: 50%; margin-left: 0;"/>	
Total	US\$ 9,756,400

LPAC Approval Date:
 Program Officer: Khadija Belfakir

Brief Description: The project will conserve globally significant biodiversity in the southern flank of the High Atlas through an innovative approach integrating pastoral range management with biodiversity conservation in a grazing-dependent ecosystem. Simultaneous global and national benefits are expected, which would ensure both a demonstration effect and a self-sustaining local process after project completion. Threats to biodiversity are rooted in imbalanced incentives towards indiscriminate settlement, conversion of wetlands and common pastures for crops, reduced mobility of livestock, and lack of awareness. The project will address these root causes through a revival of bio-friendly transhumance and common property management regimes, land use planning and innovative incentives for rangeland and wildlife biodiversity conservation. The project will demonstrate the effectiveness of this innovative approach, and its applicability to other areas characterized by aridity, ecosystems co-dependent on ruminant grazing, and traditional common property management regimes that still remain viable. The Ministry of Agriculture will be the government counterpart institution responsible for the execution of the project. The project is in line with priorities set by the National Biodiversity Strategy, UNDP's sustainable development program, and by GEF Operational Guidelines.

On behalf of:	Signature	Date	Name/Title
The Government:	_____	_____	_____
UNDP:	_____	_____	_____

United Nations official exchange rate at date of last signature of project document: \$1.00 =
 * Further Details of UNDP contribution are presented in page 34 Section E3

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ACRONYMS AND ABBREVIATIONS

ADB	Asian Development Bank
AIEA	"Agence Internationale de l'Energie atomique" (International agency for atomic energy)
ANOC	"Association nationale ovine et caprine" para-statal: organization
CFD	Caisse Française de Développement
DAR	Division of Rural Affairs (Ministry of interior)
DCL	Division of Local Collectives
DREF	"Direction régionale des Eaux et Forêts" (Regional Direction of Forestry and Water)
EU	European Union
FAO	Food & Agricultural Organization
FFEM	French Global Environment Fund
GEF	Global Environment Fund
GIS	Geographic Information Systems
GoM	government of Morocco
GTZ	German Agency for Technical Cooperation
IBRD	International Bank for Reconstruction and Development. A group of WB
IFAD	International Fund for Agricultural Development
KfW	German development bank
MADRPM	Ministry of Agriculture, Rural Development and Fisheries
MOR/81/004	UNDP/FAO project of Azilal in the northern flank of the High Atlas
MOR/92/010	Project in the Central High Atlas (PHAC)
MOR/97/00	Program for "Formulation of a national governance program and institutional capacity building project"
MOR/97/004	Program for "Support to the Protection of the environment, the Management of Natural Resources and the Promotion of Renewable and Alternate Energies"
NCU	National Coordination Unit
NEAP	National Environmental Action Plan
NEF	Near East Foundation

OPEC	Oil Product Exploration Company Ltd.
ORMVAO	"Office Régional de Mise en Valeur Agricole de Ouarzazate"
PDF-B	Project Development Facility (amount ceiling: 350 000\$)
PHAC	Central High Atlas Project (MOR/92/010)
PO, POs	pastoral organizations
PRA, PRAs	Participatory Rural Appraisal
PTC	Provincial Technical Committee
PU	Project Unit
RC	Rural Communes
SIBE	"Site d'Intérêt Biologique et Ecologique" a general category established by the National Protected Areas Strategy to designate any kind of protected area: Park, Reserve, etc.
SIMEL	National Livestock Monitoring Program
UNDP	United Nations Development Program
UNICEF	United Nations Children's Funds
USAID	US Agency for International Development
WB	World Bank

A. CONTEXT

A.1 DESCRIPTION OF COUNTRY AND SUB-SECTOR

The Mediterranean Basin, one of five regions in the Mediterranean biome, is an exceptionally rich area of biodiversity. Over half of its 30,000 vascular plant species are endemic.¹ Morocco, with a land area of only 715,000 km², of which 300,000 km² is in the Mediterranean Basin, is the second most biologically diverse country in the Basin, surpassed in species and habitat diversity only by Turkey². The ratio of species richness to land area is highest in Morocco (0.0126) followed by Spain (0.0125) and Turkey (0.0104). Over 41% of the endemic plants in Morocco are rare or endangered.

Morocco's geography offers a wide range of landscapes and potentials for economic development. The rate of population increase is moderate (2.4%)³. However, 17.9% of the rural population is considered as poor, and they are concentrated in 13 of the poorest provinces, which includes the Ouarzazate Province (project site).

The Atlas Mountain Range is globally significant because it is one of the few relatively untouched Mediterranean mountain systems of considerable geographical scale in the world. Similar systems elsewhere (especially southern Europe and Turkey have already undergone a high degree of alteration. The Atlas Mountain Range is also one of the most important landscape features of North Africa. It is a natural barrier that inhibits moisture-bearing winds off the North Atlantic Ocean and European systems from reaching the western and central Sahara. The Atlas Mountain and the Anti-Atlas Range combined harbor more than a third of the endemic plant diversity of Morocco⁴.

The High Atlas and Anti-Atlas Mountains have significant national importance. They are relatively high potential water, food and feed reservoirs for a large proportion of the country's population. They offer an outstanding natural heritage site with important eco-tourism potential.

Over two-thirds of Morocco can be classified as arid and semi-arid sub-tropical zone. The dominant form of economic production in these areas is agropastoralism. In the Atlas and Anti-Atlas Mountain zones, the form of production adapted to this ecosystem is transhumance, with some seasonal cultivation in *wadis* or streams. After thousands of years, transhumance has emerged as a sustainable adaptation to the environment, while at the same time influencing the flora so that many species are dependent upon grazing for sustained and healthy growth. Consequently, the wild fauna has not only adapted to competition from domestic livestock (e.g. the gazelles and wild sheep), but has also adapted to the particular habitats and niches created through these millennia of co-evolution.

Ever since the 1960's, however, this form of extensive livestock production has changed in favor of more farming and settled livestock production. Much of this is through uncontrolled and chaotic sedentarization. As a result, former pastures in the plains and midlands are being over-grazed or ploughed up, the water table is showing signs of long term depletion, land degradation is increasing, and habitats for wildlife are being destroyed. As the plains and midlands were traditionally used as winter pasture by transhumants, this over-exploitation and destruction forces shepherds to stay longer in the summer (or

¹ *Ecologia Mediterranea* 21: 356, 1995.

² Fennane, M. 1997. *Botanique*. National Biodiversity Study, Morocco, Ministry of Environment, UNEP.

³ Abaab, A., Bedrani, S., Bourbouze, A. & Chiche, J. 1996. "Les politiques agricoles et al dynamique des systèmes agropastoraux au Maghreb", mimeo, CIHEAM/IAM, Montpellier.

⁴ Fennane, 1997, *ibid*.

high altitude) pastures, with increasing signs of overgrazing there. Over-use in the lower altitudes therefore also has a negative impact on the high altitudes.

This diagnosis can be applied not only to the High Atlas, but also to all other arid and semi-arid regions of Morocco where transhumance between seasonal pastures was a dominant form of production. The causes of these changes can be traced to various factors, including increasing climatic desiccation and frequency of major droughts, population growth, colonial and post-colonial policies, and a breakdown of traditional common property regimes. The GoM recognizes that chaotic sedentarization has negative impacts, and that transhumance offers a potential for long term sustainable development in these arid regions. But it also recognizes that intensification of agriculture has short-term economic benefits, which are hard to forego. The GoM currently has several pastoral projects in other arid regions, however, these do not explicitly seek the “win-win” situation that could come about through a revival of transhumance: i.e. sustainable use leading to biodiversity conservation.

A.2 HOST COUNTRY STRATEGY

Environmental strategies and policies. The growing awareness among Moroccan institutions for linking development activities with land and biodiversity degradation issues is shown by its 1995 National Strategy for the Protection of the Environment and Sustainable Development (UNDP funded), the Clearing House Mechanism on Biodiversity (GEF/UNDP), and the National Biodiversity Strategy Action Plan (GEF/UNDP funded). In early 1999, the latter completed its Action Plan for Terrestrial Biodiversity, which identified the conservation of “pastoral biodiversity” as one of its main strategic lines. The NEAP considers the central High Atlas as one of its priority zones.

The network of 154 actual or proposed protected areas identified by the Morocco Protected Areas 1996 Strategy will increase the country’s protected system from 66,000 ha. to more than 3.3 million ha. This network would encompass 100% of Morocco’s potential biodiversity conservation sites, but it would still be only about 5% of the country’s surface area. Developing sustainable development programs for biodiversity conservation would serve to complement and extend the impact of this network.

Currently reforms are being planned by the new Ministry of Forestry that would bring production and conservation closer together, and provide the basis for community oriented conservation work. However, Ministry staff lack the proper orientation for such integrative and participatory work.

The National Protected Areas Strategy has identified the Saghro Mountain (in the Anti-Atlas chain) as a potential but undefined SIBE⁵. The Saghro is shared by 10 of the project’s 14 Berber fractions, and is an indispensable resource for fall and spring grazing. This area is negatively impacted by indiscriminate settlement.

The Ministry of Forestry monitors wildlife and regulates hunting permits in the Province of Ouarzazate. The Mgoun peak and Saghro Mountains offer an outstanding natural heritage site (an estimated 20,000 tourists visit per year). The Ministry of Tourism’s program for Ouarzazate Province covers the inspection and certification of hostels and village resting homes for tourists, but there is no policy framework on eco-tourism that would help to control pollution along trekking routes. The Ministry of Interior funds the Tabant Centre for Tourism Guides (in Azilal), from whom most Tourism Companies and Trek Operators recruit certified guides. However, their training lacks knowledge of biodiversity and transhumance in arid mountains.

⁵ SIBE = “Site d’Interet Biologique et Ecologique” a general category established by the National Protected Areas Strategy to designate any kind of protected area: Park, Reserve, etc.

CBD and CCD Synergy Both the CBD and CCD conventions will be implemented through the High Atlas transhumance project. Synergies between both conventions at the national and site levels will be enhanced through multi-stakeholder participatory approaches that take into account objectives and constraints of farmers, pastoralists and other actors, addressing problems associated with land tenure systems and distortions introduced by inappropriate policies and legal frameworks. In addition, the activities and training incentives proposed by the project with the aim to provide a balance between intensive and extensive sustainable use systems through dispersing grazing pressures, reviving livestock mobility, and viable common property management will promote biodiversity, thereby CBD and CCD conventions.

At the national level, the Biodiversity Strategy and Action Plan, which was formulated in the early 1999 with GEF/UNEP support has identified, among its action plans on terrestrial biodiversity, the conservation of pastoral biodiversity as one of its main strategic lines. These actions are in coherence with the national plan of action to combat desertification, which also place special emphasis on the rehabilitation and protection of degraded rangelands.

Agricultural development strategies One of the three major outputs of the National Agricultural Strategy is the economic development and resource conservation of the mountain zones through intensification of agriculture (irrigation, erosion control, emergency feed, breed improvement, etc.). The growing awareness by the GoM of the benefits of extensive livestock production and transhumance for arid lands is shown by: its gradual reduction of subsidies to the agricultural sector; its decree 33-94 relative to rainfed (*bour*) agriculture which empowers local institutions for natural resource management; Several new donor-funded pastoral projects in the arid zones; and the recently drafted Rangeland Development Strategy which identifies the High Atlas and Anti-Atlas as a priority area for rangeland development. However, the latter proposes mono-cultures of imported forage species, and does not explicitly recognize the ecological and economic value of maintaining heterogeneity in the ecosystem, nor the value of transhumance for nature conservation.

A national program run by a para-statal organization (ANOC) recognizes the value of indigenous breeds of sheep and goats and provides subsidies to pastoralists to protect native classified breeds. The project zone has not yet been subject to an inventory of its native transhumant breeds, but there are good indications that they can be potentially classified and included in the ANOC program.

Several agricultural programs in Ouarzazate province are also part of the baseline: (i) a national livestock monitoring program (SIMEL) aimed at gathering information on long distance transhumance, and early warning systems for droughts; (ii) twice-yearly monitoring of vegetation and pasture production in a few sites in the Province of Ouarzazate by ORMVAO; (iii) a ten-year multi-donor loan to ORMVAO for rural development and intensification of agriculture.

Decentralization, land tenure and institutional strengthening. The GoM has committed itself to participatory development, empowerment of civil society, the important role of NGOs in community development, and formal recognition of indigenous use of communal areas. Several government decrees and policies provide incentives for the creation of “modern” institutions such as cooperatives and producer associations.

The GoM has embarked on a major decentralization programme aimed at granting greater responsibility to the Rural Communes. The plans include the establishment of various Local Funds for Development, and allocation of 30% of TVA (*tax sur la valeur ajoutée*) to these Funds for local budgetary autonomy. The Ministry of Interior has initiated a national debate on the management of collective land and is expected to provide clearer procedural and legal guidelines in the near future.

Activities that address poverty alleviation. Several national investment programs aim to reduce regional disparities and are considered part of the baseline (infrastructure, rural electrification, potable water, basic health and education). The Province of Ouarzazate is one of the 14 priority regions identified within the Government's "Programme de Priorité Sociales".

A.3 PRIOR AND ONGOING ASSISTANCE

The GoM is highly concerned with enhancing the development of rangeland and forest resources. The national strategy for protected areas (ADB funded) is a major activity in support of this sector. The GoM has embarked on various projects on park management, such as those assisted by GTZ, FAO/Italy and IBRD, and a few conservation projects that intervene with sustainable development in buffer zones (such as those with the assistance of EU, ADB and USAID).

Most natural resource management projects in the past, such as pasture rehabilitation trials (FAO) and the *Perimètre Pastorale* of Timahdite (USAID), have not been successful in developing a sustainable and replicable model for pastoral development. This is primarily because of the lack of effective participatory planning and development, and lack of understanding of the socio-political context⁶. However, the basic information and results of pasture and forest rehabilitation trials generated by these previous projects are still relevant today. One of the few projects showing some success is the Livestock Development Project of the Eastern Pastures funded by IFAD. The project has been instrumental in re-organizing the socio-geographical context (creation of "ethno-lignage" cooperatives based on customary institutions) for the management of common property. The herders have collectively planned and improved 300,000 hectares of common pastures⁷.

There also has been previous assistance for strengthening the capacity of academic, research and government institutions in the areas of: soil conservation (Belgium), forage and pastoral resources (FAO), water spreading (FAO), pesticide residues in the environment (AIEA), national agricultural census (FAO), impact of structural adjustment on the agricultural sector (FAO), forest and wildlife surveys (Spain), training of extension agents in participatory methods (UNDP), and practical training of MADRPM agronomists (GTZ). The UNDP funded in 1994-97 the "Network for Sustainable Development" which is currently an ongoing data base and website housed in the Environment Secretariat.

Several previous projects in the High Atlas have contributed to building local and national capacity for sustainable development. The UNDP/FAO project of Azilal (MOR/81/004) in the northern flank of the High Atlas has resulted in an integrated study of development needs that incorporates a programme for agro-sylvo-pastoral development, within a framework of conservation of natural resources and protection of hydro-agricultural infrastructure. The Central High Atlas project funded through the Ministry of Foreign Affairs of France has provided good insights into the development of the tourism industry in the mountains. The German project on protection of natural resources created personnel and institutional capacities within the *Ministère de l'Agriculture et de la Réforme Agraire* (MARA) which will be used fully in context of this project to transfer lessons learnt and experiences in the issue of natural resources management.

The UNDP Community Development Project in the Central High Atlas (PHAC) (MOR/92/010), was located in a small portion of the proposed GEF project site, and terminated in 1999. It was one of the few

⁶ Abaab *et al.* 1996. *Opcit.*

⁷ El Alaoui, M. 1996. "Les coopératives pastorales éthno-lignagères" du Maroc oriental" pp. 129-146 in Proceedings of the seminar *Pastoralisme et Foncier*, CIHEAM/IRA, Montpellier.

projects in Morocco that had seriously taken on the issue of popular participation, the revival of communitarian activities, and local level institutional strengthening. The project concentrated on assisting several settled communities with improved seeds for cereals and fruits, improved breeds of sheep, agricultural technical assistance, incentives for the marketing of charcoal and gas as an alternative fuel, health and education facilities, and infrastructure. It trained more than 550 villagers as “community agents” for extension of innovative technologies. Its activities were focused on assisting the settled communities with improved cultivation practices and intensive production systems. This strategy was useful in attempting to intensify land use around agricultural communities, thus reducing the need for clearing virgin rangelands, but the project did not strengthen the local capacity for land use planning, and thus had little impact on the root causes of land degradation. Two studies⁸ commissioned by the UNDP project in 1996/97 have provided good insights on customary rangeland management systems and participatory processes, which have been incorporated into this proposal. The success of the PHAC project provides a good basis upon which UNDP can leverage additional co-financing for the GEF/UNDP project.

A ten-year multi-donor loan (IFAD, KfW, OPEC) has been awarded to ORMVAO for agricultural intensification, fuelwood management, and alternative income activities in the Provinces of Ouarzazate and Zagora.

The GEF/WB assisted Protected Areas Management Project is an ongoing activity and will intervene in three National Parks and several SIBEs, none of which are in the GEF/UNDP project zone. It will include support to park administrations, preparation and implementation of management plans, participatory review and implementation of priority activities to reduce land use pressure on the buffer zones of the parks and reserves, environmental awareness of biodiversity concerns at the level of the buffer zone, province, region and national scales, and up-grading of GIS facilities in the Forest Department.

The proposed Project de Développement Intégré des Zones Forestières et Peri-forestières de la Province d'Ifrane will be funded through a loan from CFD and a grant from the FFEM. The Ifrane Forestry Project is currently being formulated and is due to commence in early 1999, running for 3-5 years. It will work on sustainable use and reconstitution of forests in high altitude sylvo-pastoral zones. It will join a few national level activities planned by the GEF/UNDP project, such as the Eco-tourism charter and exchange workshops.

The NGO NEF through partnership with the UNDP Projet Haut Atlas Central and others, has activities in improved stoves, alphabetization, training of women in primary health, and income generating activities in Ouarzazate Province, including a UNICEF contract that intervenes in three villages of the project zone.

Two ongoing national level UNDP projects are important for this project. One is the “Support to the Protection of the environment, the Management of Natural Resources and the Promotion of Renewable and Alternate Energies (MOR/97/004), which aims to: strengthen national capacities for protection of the environment and natural resource management using a genuinely participatory and integrated approach, to promote income-generating activities related to environmental protection, and to promote local initiatives and partnerships. The “Formulation of a national governance program and institutional capacity building project” (MOR/97/00) is designed to strengthen several GoM institutions toward better coordination, financial management, and decentralization.

⁸ 1) Hammoudou, M. 1996. “L'élevage pastoral chez les Mgoun: etude des parcours et des systèmes d'élevage”, projet PNUD/MOR/92/010., and 2) DDR/UNDP. 1997. *Participation de la population aux aménagements en milieu montagnard: le cas du Project de Développement Communautaire du Haut Atlas Central*. Ouarzazate, preliminary version

Despite their important successes, the combined impact of these projects on biodiversity management in the central High Atlas and the Anti-Atlas has been limited because of:

Inadequate integration of biodiversity conservation with sustainable development. The development projects do not take into account biodiversity issues (in some cases even creating negative impacts), and the conservation projects focus their sustainable development work only on a small buffer zone. In arid lands, the true buffer zone of a conservation area is much more inclusive and of larger scale, than that addressed by these projects, because of the aridity and extreme variability of natural resources, and the dynamic long distance land use patterns of pastoralists.

Inadequate understanding and recognition of the value of traditional transhumance systems of the Atlas. Very few of the previous support has demonstrated an understanding of the role of extensive pastoralism in sustainable land use in arid lands. Despite their concern for natural resource management, the projects are either focused primarily on conservation of protected areas, or on the other extreme, on intensive production of crops and livestock. Only a few recent projects are now concerned with the issue of common property management, but the focus appears to be on creating new institutions, rather than on using traditional customary institutions. There is a distinct lack of recognition of indigenous technical knowledge and systems⁹. There has been inadequate concern for traditional *agdals* (forest and range reserves) that are fast disappearing under high use pressure.

Ineffective participatory planning and implementation. Only a few projects have had success in promoting true participatory planning and development. Most regional and provincial government staff lack training in this area.

The proposed GEF project intends to promote biodiversity conservation through sustainable use of rangelands, by building on the lessons learnt by these projects, and by filling gaps that are incremental to the baseline.

A.4 INSTITUTIONAL FRAMEWORK

Four government ministries form the Core of an integrated institutional support for the project. The Secretary of State for the Environment resides within the Ministry of Regional Planning, Environment, Urbanization and Habitat. The GEF Operational Focal Point is within the Directorate of Observation, Studies and Coordination of this institution. The Environment Secretary can convene whenever required, the National Environment Council, which has a National Biodiversity Committee. This Committee is a forum where projects and programs are reviewed and coordinated among different ministries, NGOs and private sector representatives. The Environment Secretariat has recently created similar forums at the Regional and Provincial levels.

The Ministry of Agriculture (MADRPM), as the lead institution for the project, houses the Livestock Directorate, which includes the Division for Pastoral Development. This Division currently oversees several donor-assisted pastoral projects, runs the SIMEL program, and backstops the offices and staff in Regional and Provincial Livestock Directorates. The ORMVAO is a regional para-statal agency under the MADRPM in charge of agricultural development in Ouarzazate and Zagora Provinces, and has budgetary autonomy.

The Ministry of Interior's Direction for Rural Affairs, which executed the UNDP PHAC project, and was the originator of the request for this GEF project, is active both at the national and local levels in

⁹ DDR/UNDP. 1997. *opcit.*

furthering decentralization and institutional reforms. It is assisted by the Direction for Local Collectives, which oversees the functioning of customary institutions, including the administration of the Local Funds for Development by the Rural Communes. The Governorate of the Province of Ouarzazate, whose Governor is directly responsible to His Majesty the King, houses the various Divisions of the Ministry of Interior.

The Delegated Ministry of Water and Forestry, was previously a division of MADRPM, but now has a fairly independent status. It is likely to become a full Ministry in the future. Its Directorate of Conservation of Natural Resources is charged with the oversight and management of wildlife and protected areas.

The government's decentralized structures provide excellent support for the project. The following institutions are located in Ouarzazate Province: the Provincial Administration, the ORMVAO, delegations from all related Ministries (forestry, public works, environment, tourism, health, education, etc.), and the Rural Communes. The Governor presides over weekly coordination meetings of the Provincial Technical Committee, composed of all the above and elected officials; however, biodiversity conservation is yet to be adequately integrated into this process.

Several NGOs are active in the Province, including NEF and Tichka Association. Both work on similar activities, such as: alphabetization, primary health care, renewable energy, and alternative income activities.

The customary system consists of a hierarchy of tribal, fraction, and lineage leaders and councils. A total of 14 fractions are directly concerned with this project, while another 5 neighboring fractions are secondary target beneficiaries due to the traditional accords that allow them use rights to the lands in the project zone. In addition, traditional pasture reserves are controlled by a chief who is accountable to the customary leadership.

B. PROJECT JUSTIFICATION

B.1 PRESENT SITUATION AND PROBLEMS TO BE ADDRESSED

B.1.1 Ecosystem characteristics

The High Atlas Mountains of Morocco reach an altitude of 4167m, while its valleys drop to 1000m, resulting in a very steep precipitation gradient. Because of its role as a climatic barrier, and because of altitudinal and climatic variations, the Atlas offers heterogeneous habitats and variable conditions for a highly diverse group of flora and fauna, some of which are very rare, endangered or nearing extinction.

The southern flank of the High Atlas is one of the few regions in the world where both temperate and sub-tropical plant species can co-exist along an altitudinal gradient. Three major ecozones can be distinguished in the project zone (Map 1).

High Atlas mountain (above 2500m) including the second highest peak in Morocco, the Mgoun (4060m), middle altitude foothills of the High Atlas and Anti-Atlas (Saghro) Mountains (1500-2500m), and plains of the Dades River (less than 1500m) which drain both the southern Atlas Mountain as well as the northern flank of the Saghro Mountain.

The precipitation gradient is extremely steep in this area, going from over 1000mm annually in the high altitudes, to less than 100mm in the plains. Annual rainfall has a coefficient of variability greater than 35%. The three zones are ecologically and economically interdependent. Migratory species, whether wild or domestic, use the altitudinal gradient on a seasonal basis.

The heterogeneity of this arid land is due not only to the altitudinal gradient but also to thousands of years of co-evolution between the ecosystem and a diverse mixture of domestic livestock. Most species and habitat patches are grazing dependent, and negatively affected by both over- and under-grazing (Annex 6).

The High Atlas and Anti-Atlas Mountain ranges together account for over one-third of the plant diversity of Morocco. This area has unique floral diversity and high endemism, making it globally significant as an arid land biodiversity “hot spot”. At least 164 plants endemic to Morocco occur in the High Atlas¹⁰. Of these, 21 taxa occur only in the project zone (Central High Atlas and Anti-Atlas) – a significant number by arid land standards. About 64% of all endemic plants are classified as vulnerable, rare or very rare including the aromatic plants *Salvia gattefossei*, *Lavandula mairei*, the wild olive *Olea sylvestris*, and several grazing dependent species. In total, 49% of the area’s endemic plants occur in the high mountain ecozone, and 49% in the middle mountain zones (including the Saghro Anti-Atlas). Only one endemic plant has been recorded in the plains because of the high degree of land degradation.

Almost 50% of all terrestrial vertebrates present in Morocco occur in the project zone. Of the amphibians and reptiles, 7 species and 3 sub-species are endemic, including *Quedenfeldtia trachyblepharus*, *Lacerta adreanszkyi*, and *Vipera monticola* in the high altitudes, and *Saurodactylus brossei*, and *Bufo brongersma* in the middle altitude. Of the 236 species of birds nesting in Morocco, at least 98 species occur in the project zone. Ten of the 23 species and sub-species of birds endemic to Morocco occur in the project zone, at least one of which, *Gypaetus barbatus barbatus*, is very threatened.

Among the wild mammals of Morocco, 41% are present in the project zone, including 5 out of 12 endemic mammals of Morocco. All five are highly threatened through hunting: *Elephantulus rozeti*, *Atlantoxerus getulus*, *Ctenodactylus gundi*, and the migratory *Gazella cuvieri* and *Ammotragus lervia*. The last remaining panthers of Morocco have been reported in the southern flank of the High Atlas. Domesticated transhumant mammals also present a high degree of within species genetic diversity and adaptation to the local ecosystem.

The endemic Ferao Trout is present in high altitude springs and streams, but is currently in decline due to watershed degradation. Some evidence shows that the endemic Sahara Bee has a symbiotic, co-dependent relationship with several plants endemic to the project zone, but its population was drastically reduced after widespread application of insecticides on farms, and introduction of the more aggressive exotic “black bee”.

B.1.2. Land users

The agro-pastoralists of the southern Atlas Mountains raise sheep and goats, and produce cereal and fruits in 5-10% of land area along the fertile valleys in the mountains. According to the 1995 census, the overall population density is low in the Province of Ouarzazate (24 people/km² and 24 ha/LSU). However, people and livestock are not evenly distributed throughout the land. In the project zone, a total estimated population of 90,000 is concentrated in 220 villages along mountain streams and the Dades River. The rapid rate of sedentarization is tacitly allowed by the local authorities because of insufficient capacity to control it, but is widely seen to be detrimental to transhumance.

¹⁰ Cuzin, F. 1998. *Rapport sur la Biodiversité dans la région du Mgoun-Bassin de Skoura- Sargho Occidental*, consultancy report, UNDP/GEF – PDF-B Formulation Mission.

Transhumance is still practiced by 20-80% of the population, depending on the sub-tribes and fractions¹¹. The majority move between the high mountains (summer), middle altitudes (fall and spring) and lowlands (winter). Among these there are two major patterns: summer in the High Atlas and winter in the Saghro and summer in the High Atlas and winter in the Dades plains. Several fractions of the Mgoun tribe have reciprocal arrangements for pasture use with their neighbors on the northern flank of the High Atlas. Five other Berber fractions (primarily the Aït Atta) have traditional agreements to use the pastures of the Mgouna Tribe. A minority move seasonally with trucks to other provinces in search of better pasture or where the extended family has invested in irrigated land.

Transhumance has adapted to the arid, variable and unpredictable ecosystem for thousands of years. Mobility of livestock has encouraged heterogeneous patches of habitat for greater diversity of flora and fauna. Increased biodiversity benefits both pastoralists and conservationists (Annex 6 explains the ecological and economic reasoning of the new “bio-friendly transhumance” theory).

The Ministry of Interior, who retains the “tutelar authority” over all collective land, has already demarcated and allocated common pastures in the project zone to sub-tribes and fractions (“Collectivité Ethnique”). By doing so, it has converted the post-colonial “open access” situation to a “common property management” one. This administrative demarcation documents the land area, the fraction responsible for it, and any recorded opposition to the demarcation. Several government decrees and policies provide incentives for the creation of “modern” institutions such as cooperatives and producer associations.

The majority of pastoralists in the High Atlas continue to adhere to traditional laws that govern daily use of pastures through negotiated reciprocal access. Covenants that prescribe the limits of resource use are established over high quality areas (“key sites”), such as *agdals*, mountain meadows, permanent shelters, camping sites, water points, and vegetation patches of particular value.¹² *Agdals* (traditional nature reserves), are maintained and regulated through sub-tribal, fraction or village councils, in order to protect and allow sustainable use of pastures.¹³ Access to pastures and key sites by outsiders is granted only after review by the traditional council. Rules are enforced by scouts, chiefs of *agdals*, and guards.

In Ouarzazate Province, the customary common property regime is still viable although weakening. The traditional council (*Jmaa*), made up of customary chiefs (*Sheikh* and *Mogaddam*), heads of lineages and other notables, has control over land allocation, conflict resolution, and other decisions at the local level. A representative of the *Jmaa* (the *Naib*) works directly with the local government (Rural Commune), represented by the *Qaid*, and with elected officials represented by the Collective Council. The *Qaid* is asked to intervene only in serious conflicts that the customary system is not able to resolve. In general, conflicts rarely arise over pasture use, except in bad years when pasture productivity is low, or due to external social and political factors¹⁴. The Rural Communes have the legal authority to conduct long term

¹¹ Data from a rapid survey conducted during the PDF-B among 10 out of 15 fractions in the Province. Reported by Jeanne Chiche.

¹² Mahid, M. 1995. “Les parcours collectifs: gestion locale et mutations en cours”, *Seminaire international Réseau Parcours*, Tabarka, Tunisie, 13-15 Octobre 1994. *Parcours demain* numero special Juin 1995.

¹³ Boulberj, L. & L. Aït Hroch, 1995. “Les *agdals* dans la région d’Imilchil: importance et mode d’exploitation”, *Parcours demain*, numero special Juin 1995.

¹⁴ The PDF-B identified two sources of conflict in the project zone: (i) due to the enclosure of pastures planted by the Ministry of Agriculture with *Atriplex numularia*, (a forage plant from Australia), and (ii) due to illegal incursion by the shepherds of one fraction into the territory of another.

land use planning, but they do not have the capacity, nor are they integrated enough with the customary system to do so effectively.

The authority for land use planning has been given to local government (Rural Communes), and not to the customary system. But land use planning and enforcement does not occur because of the lack of capacity of local government. Although links exist between the customary and modern administrative systems (a representative of the Fraction Council works directly with Rural Communes, and a government representative is assigned to interface at the Tribal level), a closer integration between the two systems is necessary to allow effective land use planning and enforcement.

Wildlife conservation is as yet not part of the cultural norm, so that there is over-gathering for sale or medicinal use, and willful destruction of species deemed “dangerous”. There are also fears that as the tourism industry becomes more important in the Atlas mountains, it will have negative environmental impacts unless guidelines and regulations are developed and applied now.

B.1.2. Problems to be addressed by the project

In the past few decades, increasing pressure on the High Atlas’ multiple resources has led to deterioration of globally significant biodiversity, and gradual simplification and loss of uniqueness in the ecosystem. “Patch” variability, or ecosystem heterogeneity for a diverse set of species and interactions, has been reduced as a result of these pressures. Loss of heterogeneity is also detrimental to extensive livestock production. Although there is evidence that the ecosystem is deteriorating, it has not gone beyond the threshold of recoverability.

A participatory diagnosis of threats to biodiversity was conducted during the PDF-B among a sample of villages, local leaders, and government experts (Figure 1). These threats are:

Chaotic settlement and conversion of land to crops. Opportunistic settlement and unsustainable cultivation by relatively poorer households is occurring in riverbeds (oases) of the plains and midlands. In a few fertile oases, cropping can be sustainable, but most riverbeds are marginal for crops and should be preserved for extensive grazing and as key habitats for fauna and flora. Chaotic settlement blocks both transhumance and migratory species’ routes, causes surrounding pastures to be overgrazed by settled, non-transhumant livestock, and results in palatable bushes being over-used for fuelwood. Since the plains and midlands were traditionally reserved for communal winter pastures, chaotic settlement in lower altitudes is also a threat to biodiversity in the highlands. A decrease in grazing capacity in the lower altitude forces transhumant shepherds to stay longer in the highlands, causing higher grazing pressure there. By building local capacity for natural resource management and enforcing land use zoning, chaotic settlement would be controlled and impediments to transhumance would be lifted.

Overgrazing and under-grazing. Livestock mobility and transhumance are in decline not just because of chaotic settlement, but also because of a breakdown of traditional common property management. With a breakdown of common property regimes, traditional wells are falling into disrepair, resulting in overgrazing around functioning wells. Overgrazing decreases globally significant endemic plants such as *Trifolium humile* and *Festuca dryis*. Under-grazing in remote pastures, and where communal wells have broken down, leads to less stimulation and gradual loss of grazing-dependent endemic grasses such as *Stipa nitens*, and *Digitalis lutea ssp transiens*, and endemic legumes such as *Astragalus ibrahimianus*. Many endemic fauna depend on the same habitat as domestic animals, such as the birds *Sylvia deserticola maroccana* and *Eremophila alpestris atlas*, the squirrel *Atlantoxerus getulus*, and the wild sheep *Ammotragus lervii*. By re-establishing common property regimes, and providing carefully designed economic and institutional incentives for a revival of transhumance, local over-grazing and under-grazing would be avoided, and habitat preserved for endemic flora and fauna.

Over-exploitation and destruction of wild fauna. In addition to habitat conversion (above) other threats to wild fauna are: willful destruction of “dangerous” fauna (reptiles, snakes, scorpions such as the endemic *Vipera monticola*, and *Tarentola boehmei*); over-exploitation for traditional pharmacopoeia (e.g. *Saurodactylus brossei*) or exportation and tourism trade (*Vipera monticola*); illegal and unsustainable hunting of endemic gazelles, wild sheep and birds (e.g. *Gypaetus barbatus barbatus*); and gathering of bird’s nests by shepherds along transhumance routes. A long term campaign on awareness raising targeting adults and children, providing models for alternative livelihoods, and building capacity of local authorities to enforce hunting laws would be needed to reverse these trends.

Tourism. Other impacts of tourism, such as localized overgrazing by pack animals, disturbance to wildlife and nesting sites, and littering, are not currently endangering globally significant species, but may do so in the near future as tourist numbers are expected to rise. The timely establishment of an Eco-tourism Charter and training of local guides would help to preempt this future threat.

The underlying root causes of these threats are:

Ineffective land use planning and enforcement at the local level. Modern and customary institutions are unable to control chaotic, unsustainable settlement in marginal lands. Although the legal framework for common property tenure exists, the laws are unclear as to common property management, and are therefore inadequately applied. This has led many pastoralists to settle on private plots for greater land tenure security. Local leaders have insufficient capacity for planning and enforcing land use and natural resource management rules.

Breakdown of communal management systems. The lack of maintenance of collective water points in the highlands, and lack of control of chaotic settlement in the winter pastures are due to a historical erosion of collective systems of common property management. This in turn is caused by:

1. inadequate reinforcement by the government of viable customary natural resource management systems,
2. reduced authority of collective institutions as land is privatized,
3. lack of long term political and economic viability of common property systems, and
4. inadequate appreciation by most politicians and technicians of the potential of transhumance for both sustainable development and biodiversity conservation.

National agricultural policies in the past subsidized the farming and intensive livestock sectors through lower prices for seeds, fertilizers, and agro-industrial feed, at the expense of extensive livestock production. As a result, there are reduced incentives for transhumance and more for settlement. This policy is slowly being reversed as the GoM recognizes the comparative advantage of extensive livestock in marginal lands.

Lack of awareness and lack of enforcement. The general population, at both the local and national levels, is unaware of the importance of preserving wild fauna for future generations. Morocco’s Wildlife Service regulates hunting permits and gives customary leaders the authority to monitor infractions. However, the latter have insufficient grassroots capacity to enforce these measures. Furthermore, the tourism industry lacks a formal code of conduct concerning protection of biodiversity.

B.2 EXPECTED SITUATION AT END OF PROJECT

Chaotic settlement, breakdown of common property management, and localized over-grazing and under-grazing are the main threats and root causes of biodiversity loss in this grazing dependent ecosystem. Adequate zoning would guide settlements and farms to fertile oases, leaving the rest for extensive grazing

and transhumance. Through integrated common property management, impediments to the revival of bio-friendly transhumance would be lifted, and overgrazing and undergrazing would be avoided. Sustainability and biodiversity of the overall system would be enhanced. The long term trend with current opportunistic settlement and ineffective common property management is toward greater biodiversity loss in the midlands and highlands, and long term unsustainability of production systems.

Environmental benefits: The project is expected to halt the loss of biodiversity, and conserve and sustainably use biodiversity in the target site. Activities on rangeland management will directly benefit overall plant diversity and density. Activities on co-management of the Saghro SIBE will benefit wildlife and flora in the Saghro. Demonstration of techniques for sustainable use of wildlife will beneficially affect economically important species, such as Sahara bee, and other species collected for traditional medicines. In addition, the project will reduce the rate of land degradation around settlements, and rehabilitate degraded rangelands.

Human benefits: The project is expected to demonstrate that it is possible to substitute an unsustainable form of agricultural production with a sustainable one, while keeping any short term costs to the absolute minimum. It will do so by lifting the economic, institutional and political constraints to a spontaneous revival of traditional transhumance, at the same time as providing alternative income generating activities. Thus the human benefits of the project are expected to be in terms of sustainable economic development, equitable access to improved social services while on transhumance, and greater awareness of the long term benefits of biodiversity. In addition, by promoting participatory development, and building the capacity for democratic decision-making, transparency and accountability at all local institutional levels, the project will enhance the processes of decentralization already undertaken by the GoM.

Institutional benefits: The project will build up the capacity of existing institutions to manage natural resources, conserve biodiversity and promote sustainable development. Specifically, it will use participatory planning techniques to develop a model for integrating the institutions in such a way that the strengths of each are captured and built upon. The primary focus will be on integrating customary and local government institutions for land use planning and regulation of transhumance. The project's capacity building activities will also benefit technical services of the government in terms of greater awareness and capability for participatory development, and mainstreaming biodiversity conservation into regular programs. The main focus of these activities will be with the four core ministries (agriculture, environment, forestry and interior), but other relevant ministries (e.g. tourism, health, education and public works) will also benefit. At the national level, the project's activities will benefit national NGOs that support pastoralists, as well as Ministry Staff in the four Core Ministries. The staff and target beneficiaries of several collaborating projects will also benefit indirectly through activities jointly planned and executed with the project, such as workshops, mass media campaigns, and exchange visits.

B.3 TARGET BENEFICIARIES

Stakeholder groups who will benefit directly from the full project are expected to be herders/shepherds and their mobile families, livestock owners, women who use natural resources, children, and customary leaders at the local level. These groups will benefit from physical interventions, training and awareness raising, and increased financial resources from the Local Revolving Funds. The primary target is the 14 Fractions directly involved with the project, however, neighboring Fractions who have customary relations with the target population will also benefit by having their use rights protected, being involved in decision making, and using rangeland improvements. Table 1 provides the list of fractions, tribes and Rural Communes that will be the direct and secondary beneficiaries of the project.

The key customary leaders involved with the project are the *Shiyukh* (Tribal leaders), *Naiib* (representatives of the Fraction who sit on Government Panels), *Qaid* (Government appointed representatives that interface with the Tribes), and Chiefs of *Agdals* (customary reserves). These four categories of leaders represent not only their office, but will also sit on any new pastoral organization created through the project. This may include the “Transhumance Management Committees” which are intended to be a grouping of 3-4 Fractions, in order to facilitate collective decision-making concerning rangeland management and conservation.

Provincial government and ministry staff and national ministry staff will benefit from training and capacity building. National Research/Development Institutions (whether academic or NGO) will benefit from sub-contracts. A national NGO will benefit from training and assistance to establish a Newsletter. The Provincial Technical Committee, an existing technical supervisory body, is another institution of relevance to the project. It includes not only government officials, but also elected representatives of the Rural Communes. It will be involved in supervising and disseminating the results of the project.

The target population of at least four other ongoing and pipeline associated projects are expected to benefit indirectly from the project, through joint activities and dissemination of results.

Another important stakeholder group that has expressed an interest in the project is the private Tourism Sector, particularly those companies involved with Trekking and Tourism in the Atlas Mountains. They are particularly interested in the twin aims of (a) conservation and sustainable use of the resources in the Mountains, and (b) training tourism guides and developing an Eco-Tourism Charter.

B.4 PROJECT STRATEGY AND IMPLEMENTATION ARRANGEMENTS

B.4.1 Project strategy

The southern High Atlas is a productive agricultural landscape. Although the ecosystem is deteriorating, it continues to harbor globally significant biodiversity, and has potential for sustainable development. In the long run, without intervention, both biodiversity will be lost and resource use will be sub-optimal. The GEF Project will demonstrate an innovative approach in which biodiversity “hot spots” (e.g. Mgoun Peak, specific nesting sites, Saghro Peak) will be protected, and the resources in between will be sustainably used, through a participatory framework for bio-friendly transhumance and common property management. This is expected to at least maintain current high levels of diversity, and at the same time provide sustainable resource use benefits.

The aim of the project is to find an ecologically and economically appropriate balance between intensive and extensive production systems that would favor biodiversity conservation. The strategic solution adopted is that people can settle in appropriate sites, as long as their livestock keep moving, and farming is done sustainably. Therefore, baseline activities that encourage intensification are not a contradiction to the project’s philosophy, but must be tempered through land use planning to reduce their negative environmental effects, and must be balanced with additional incentives for extensive livestock production.

Project activities are to be funded through a package of financing so that the comparative advantages of each contributing institution are utilized to the maximum. Government, local level, and donor contributions are used primarily for activities that (a) bring the baseline to a sustainable level, and (b) replicate models and pilot activities tested by the project. GEF financing is used primarily for lifting the following barriers:

- Institutional barriers: by integrating traditional collective and government planning institutions through a participatory planning framework; and developing an innovative approach to co-management of a potential Reserve.
- Information barriers: by understanding the status and condition of both biodiversity and transhumance; fostering a participatory planning and monitoring process; and increasing awareness of the long term value of biodiversity.
- Technological barriers: by training local authorities in modern land use planning and management techniques, including land use zoning; training shepherds and traditional resource chiefs in rest/rotation and enrichment techniques; training both government and local people in the co-management of a Reserve; developing appropriate models for mobile delivery of social services as additional incentives for a revival of transhumance.
- Economic barriers: by introducing a fee based system in collective rangeland; raising the social and economic status of shepherds through professionalization; finding innovative means to reduce and cover short term costs incurred through foregone grazing rights as rangelands recover; and demonstrating alternative income activities based on sustainable use of biodiversity.

An essential strategy of all GEF projects is the judicial integration of GEF incremental funds with that available from co-financing. Those activities of the project that are not eligible for direct GEF funding, but which nevertheless provide indirect benefits to biodiversity conservation, or are required to provide incentives for sustainable use and conservation, can still be considered as part of a package of project activities as long as adequate co-financing is identified for them.

The southern flank of the central High Atlas Mountains extending into the Anti-Atlas Saghro Mountain, is chosen as a pilot area because of its unique and important biodiversity, persistence of transhumance, and as it is a “stepping-stone” between two nearby protected areas (the Toubkal National Park, 140 km to the west, and the Eastern High Atlas National Park, 100 km to the east).

The scope of the project at the local level covers 5000 km² of the Province of Ouarzazate used by the transhumance cycle of 14 fractions of 3 Berber sub-tribes (Map 3). The project will also work on transhumance/biodiversity issues at the provincial and national levels, thus extending its scope, and ensuring that local actions will be sustained and replicated in the future.

Experience shows that there are significant and qualitative differences between transhumant/mobile populations and settled populations. Working with transhumants requires more investment in “awareness raising” and capacity building (both government and local people), as well as a higher percentage of administrative costs (primarily for transportation and communication).

As the proposed project is located in arid lands, special consideration has to be given to extending its life beyond the “normal” project cycle of 3-5 years. Arid ecosystems are primarily influenced by a highly variable climate; in the project zone major droughts are estimated to occur every 8 years, and moderate droughts every 3 years. Droughts and other sources of climatic variability (extremely low temperatures in the mountains), reduce physiological growth of plants and animals. As a result, a normal project lifetime is not enough to ensure scientifically measurable or significant results in biodiversity conservation. In addition, experience has shown that projects that work with local institutions and common property regimes require considerable “start-up” time in order to ensure an adequate and effective participatory planning and development process. The lifetime proposed for this project is 7 years.

Stakeholder participation in, and more importantly, “ownership” of the project is a critical element for ensuring the long term sustainability of the results of the project in the target area. The previous PHAC project, although on a smaller scale than the present project, has initiated an excellent basis for stakeholder participation. Local communities and governments are now familiar with the concept, and would not accept anything less.

In addition to consultations already done during the PDF-B process, the full project will emphasize capacity building of local leaders and institutions where ever deemed necessary in order to ensure that the process of project implementation is participatory. Capacity building for, and regular public meetings on, participatory monitoring and evaluation are also a key feature of the proposed project. The project design is flexible enough to allow changes in activities as a result of feedback from consultation with all sources. In particular, two major elements will ensure this flexibility:

- *Integrated Management Plans*, which are developed through a relatively long (even up to 2-year) participatory process, are a means by which target populations and other stakeholders can ensure that their needs are adequately met;
- *Revolving Funds* established through co-financing, that will allow the local communities to decide and fund activities that have not been envisaged by the project document, but which still fall under the main objectives of the project.

Participatory planning is a major tool of the project, and is an ongoing process. Critical points during project implementation at which consultations are crucial, and categories of groups represented in these consultations are:

Signing of “conventions” that establish project workplans	between Heads of Rural Communes, local leaders, and project, and between relevant government entities and project
Establishment of the specific design for the creation of pastoral institutions	Brainstorming workshops with local leaders and government experts
Integrated Management Plans	Dissemination through mass media techniques and public meetings for obtaining feedback and final acceptance by population of 14 Fractions and neighboring Fractions
Implementation of Management Plans	Public meetings with population of 14 Fractions and other “Secondary” Fractions to establish level of commitment (financial, physical) and respect of rules
Drafting of National Pastoral Code and Eco-Tourism Charter	series of expert panels and planning workshops with national level ministry staff, using provincial and project staff as technical assistance, complemented with awareness raising campaigns and lobbying efforts at the national level

Stakeholder “ownership” of the GEF project plan has been achieved as far as a 6-month participatory formulation process (PDF-B) can allow. Local leaders have been consulted either in public meetings, or individually. Logical Framework Exercises have been conducted with all relevant government officials and experts both at the national level and in Ouarzazate. A two-month PRA exercise was conducted in a sample of 30 villages (the sample chosen during a meeting with local leaders). During this exercise, several key stakeholder groups were consulted: herders, livestock owners (if different than the former), women, and customary leaders. As a result of these various exercises, the objectives and activities of the proposed project were refined, and several new elements added.

During this PDF-B process, all customary leaders and government officials and experts have been not only consulted but also asked to make key decisions, such as:

- list of Rural Communes, tribes and sub-tribes to be included as primary target areas
- list of tribes and sub-tribes to be considered as secondary participants (particularly those transhumant tribes that frequently use the project area)
- objectives and outputs of the project
- level of commitment of each stakeholder group to the project

As a result of these meetings, customary leaders have congratulated the project formulators publicly for involving them in the decision making, and have expressed their strong desire in front of government officials, for the full project to continue to do so.

Stakeholder participation will be sustained throughout the project life by ensuring that:

- project staff are recruited for their knowledge of participatory development and provided additional training and resources to effectively deal with the specific requirements of participatory planning and development among mobile transhumant populations
- government staff are trained in participatory planning and development
- capacity of customary leaders is raised for planning, accounting, and transparency
- local “ownership” of project activities is shown not only by in-kind contribution , but also cash contribution where necessary (user fees, membership fees).

The latter three points are also expected to ensure sustainability of stakeholder participation beyond project life.

In most pastoral societies, women have an invisible role in livestock production. Among the Berber, women are in charge of gathering fodder for stall-fed animals, milking and dairy processing, and fuelwood gathering while on transhumance. They also ensure the health and education needs of the family while on transhumance. Thus, the project will ensure that its activities benefit women as well as men, and that women are increasingly involved in participatory decision-making processes.

B.4.2 Implementation Arrangements

The project will be executed nationally by the Ministry of Agriculture’s Direction for Livestock, with assistance from UNDP’s Country Office through National Execution arrangements. UNDP will assist with the implementation of the project (support for reporting, financing/accounting and other services) through its decentralized country office system, and will actively seek co-financing for any related and off-shoot activities. The organigram of the project (Figure 3) highlights four main institutions that will be involved with project implementation:

1. Local level institutions represented by existing pastoral organizations (POs) and possible intermediary institutions (e.g. “Transhumance Management Committees”).
2. The Project Unit, based in Ouarzazate
3. The Provincial Technical Committee
4. The National Coordinating Committee
5. Four associated projects

At the local level, the **Rural Communes, local leaders (*Qaid, Naib, Agdal Scouts*)** will be directly involved in the day-to-day activities of the project (estimated 30% partial engagement), particularly in the creation of appropriate pastoral organizations, land use planning implementation of Management Plans

and conflict resolution. Contracts or Terms of Agreements will be established with appropriate institutions for the implementation of specific activities.

The **Project Unit** will be headquartered in the offices of ORMVAO in the town of Ouarzazate, but will have budgetary autonomy. It will be headed by a National Project Director (expert in pastoral organization and participatory development and recruited by UNDP) who will work closely with the Director of ORMVAO. The Project Unit will include three divisions:

- *Administrative Division* staffed by an Accountant/Manager, secretary and two drivers. These four national personnel will be assigned to the project by the ORMVAO on a 100% basis.
- *Participatory Planning, Monitoring and Evaluation Division* headed by an expert in participatory development among pastoralists (UNDP recruited) and assisted by a Coordinator of Women's Activities (UNDP recruited), and an expert on Participatory Monitoring and Evaluation seconded by the government on a full time basis. The division will be based in Ouarzazate and will work with field agents based in each Rural Commune. These agents will be assigned to work for the project on a half-time basis, as follows: 10 local agents from the Rural Communes, 5 local agents from ORMVAO, and 3 forestry agents. The Governor, the Director of ORMVAO and the Regional Director of Forestry have confirmed their agreement on these assignments.
- *Technical Division* consisting of three national experts provided by the government: a specialist in transhumance on a full-time basis (ORMVAO), a specialist in rangeland improvement on a half-time basis (ORMVAO), and a specialist in dryland biodiversity (DREF). Other ORMVAO and governmental departments will provide assistance on a part-time basis as and when required and approved by the Provincial Technical Committee, and based on a workplan and "convention" agreed upon beforehand.

The Project Unit will be assisted when necessary by both national and international consultants, the former through sub-contracts with individuals and/or institutes, and the latter through special service agreements. These consultancies will focus on several technical issues such as: training in participatory development, design and implementation of pastoral organizations, in-depth biodiversity studies, and how to conduct awareness raising campaigns. US Peace Corps has expressed interest in assigning Peace Corps Volunteers during the project's 7 years in the domain of community development and possibly biodiversity. The Volunteers will be provided housing and necessary equipment and other support by the project and its partner institutions.

The project will be supervised by the **Provincial Coordination Committee**, a sub-set of the existing Provincial Technical Committee, and presided by the Governor of the Province of Ouarzazate. The Project Unit will assure the secretariat of this smaller Committee, which has the tasks of reviewing the progress of the project, its annual workplan and budget, and to foster coordination among the different institutions. The Committee will meet every three months, and will be composed of: the Director of ORMVAO, the Chiefs of the Division of Rural Affairs (Ministry of Interior), and Division of Local Collectives (Ministry of Interior), the Regional Director of Forestry and Water, the Regional Director or Tourism, and the Presidents of the elected Provincial Council and relevant Rural Communes (in addition to any persons judged necessary at the time, such as the Provincial Directors of Public Works and Equipment, Health, and Education).

The Direction for Livestock, Ministry of Agriculture, Rural Development, and Maritime Fisheries, is designated as the **National Coordination Unit** to assist the Project Unit in implementing national level activities, and to coordinate actions between the relevant Ministries at the national level. The Project Unit will establish the relevant workplans for national level activities in consultation with the National

Coordination Unit. The latter will report to the Project Director on the implementation of activities on a monthly basis. The National Coordination Unit will be headed by a National Coordinator (20% partial engagement assignment from Ministry of Agriculture, Direction for Livestock), and assisted by one Ministry staff member (50% partial engagement).

Because of the inter-disciplinary nature of the project, the National Coordination Unit will convene and be assisted by a National Coordination Committee, composed of: the Director of Natural Resource Conservation of the Ministry of Forestry and Water, the Directors of Rural Affairs and Collectives of the Ministry of Interior, the Director of the Observation Unit of the Ministry of Environment, a representative of the Ministry of Tourism, the UNDP program representative, the Governor of the Province of Ouarzazate or his representative, and the Director of ORMVAO. The National Coordination Committee will meet yearly and will appoint a smaller “Core Committee” who will supervise and coordinate the needs of the project at the national level meeting every six months, and composed of Focal Points appointed in each of the four Ministries of Agriculture, Environment, Forestry and Interior. A quadripartite convention has been established and Annexed to this Project Document between these Ministries as a framework for this coordination.

As many national level activities, particularly on studies, workshops, policy papers, and awareness raising campaigns will be conducted jointly with four associated projects (CFD/FFEM Ifrane, IFAD Errachidia, IFAD Tafilalt, and FAO/Italy Taza). A joint *ad hoc* committee between the projects will be established on which the National Coordination Unit would represent the GEF project.

The following Table provides a brief description of the functions of the different institutions relevant to the project. The role of the various entities as regards the execution and implementation of the project is also described.

Institution	Role in Project
Government Agencies:	
<p>The Ministry of Agriculture’s Direction for Livestock in Rabat houses several units, including the Veterinary Department, SIMEL (early warning system for food and feed security), Animal Production (including forage seed production), and the Pastoral Development Department.</p> <p>The Pastoral Development Department is staffed with three full time range managers. The role of this Department is to develop policy guidelines, supervise international and national projects, and monitor the performance and problems associated with the national livestock sector. It currently supervises and coordinates the Associated Projects.</p> <p>ORMVAO is a semi-autonomous entity charged with agricultural development in the provinces of Ouarzazate and Zagora. It has budgetary autonomy, but is technically responsible to the Ministry of Agriculture. Its Livestock Department includes a Veterinary Unit and a</p>	<p>The Ministry will be the national entity responsible for executing the project, accountable to UNDP for the delivery of agreed outputs.</p> <p>The Pastoral Development Department will act as the National Coordinating Unit for the project. It will enhance inter-ministerial cooperation, act as the secretariat for the National Steering Committee, and implement national level activities following the workplan approved with the Project Director.</p> <p>ORMVAO will physically house the Project Unit, and provide one full time and one part time staff for the project. It will be a member of the Provincial Technical Committee, and will directly supervise the</p>

<p>Pastoral Unit. The latter is staffed with three high level experts, two of whom are range managers. One is in charge of rangeland management and improvement, while the other is in charge of rangeland monitoring with the Unit's GIS system, and implementation of the two monitoring projects CAMELEO and ROSELT.</p> <p>The Ministry in Charge of Forestry and Water's Natural Resource Conservation Department is in charge of Protected Area Management and Forestry. This Department is currently overseeing the implementation of the GEF/World Bank project on Protected Area Management.</p> <p>The Provincial Forestry Division will soon be up-graded to a DREF (Regional Direction for Forestry and Water) and will be staffed with three forestry engineers, one of whom is a dryland biodiversity specialist. This Division also has a functional nursery, which currently contains coniferous and some fast growing and ornamental seedlings.</p> <p>The Ministry of Interior has two Departments relevant to the project: The Department of Collective Lands, and the Department of Rural Affairs. The former is in charge of demarcating collective lands and resolving land conflicts. The latter oversees the functioning of Local Authorities, as well as managing the Local Funds for Rural Communes.</p> <p>The Provincial Administration in Ouarzazate, under the direction of the Governor, houses the two Departments of Collective Lands and Rural Affairs, of the Ministry of Interior, and oversees the functioning of all Municipalities and Rural Communes. The Governor presides over the Provincial Technical Committee on a monthly basis, and approves the Socio-economic Development Plan of the Province.</p> <p>The Ministry of Environment is in charge of establishing government policy in the area of environmental protection and biodiversity conservation. It has been the entity responsible for the development of the National Biodiversity Strategy and Action Plan. The Ministry is currently establishing Regional Environmental Units, but none have as yet been created in Ouarzazate. The Observation Unit of this Ministry oversees international cooperation projects.</p> <p>The Ministries of Tourism, Health, Education and Public Works all have regional representative offices in Ouarzazate.</p>	<p>workplan and implementation of activities of the project.</p> <p>The Conservation Department is a member of the project's National Coordination Committee, and will oversee the implementation of the conservation related activities through its decentralised offices in Ourazazate (DREF).</p> <p>DREF will be in charge of directly supervising the implementation of conservation related activities, and will be a member of the Provincial Technical Committee. They will also provide a dryland biodiversity specialist on a full time basis to the project.</p> <p>The Departments of Collective Lands and Rural Affairs will be members of the project's National Coordination Committee, and will oversee the implementation of the project activities through their decentralised offices in Ourazazate (Provincial Administration).</p> <p>The two provincial departments of Collective Lands and Rural Affairs will oversee the implementation of activities related to land demarcation and local authorities, including provision of expert time and material where necessary. The Municipality of Ouarzazate will allocate the equivalent of US\$60,000 from its 5-year budget for conservation related activities in the Province.</p> <p>The Observation Unit will be a member of the project's National Coordination Committee.</p> <p>These ministries will be members of the Provincial Technical Committee and will contribute to the implementation of activities</p>
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	related to their respective domains under the coordination and supervision of the project unit.
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NGOs and Community Based Organizations

<p>Traditional institutions such as the Tribal and Lineage councils, as well as their leaders, are still active in taking decisions and resolving conflicts related to land use, natural resource use, and development. Protection and strengthening of transhumance is a strong concern for them. They recognize the need for biodiversity conservation, but need capacity built for integrating this issue within ongoing functions.</p> <p>ANOC is a national NGO concerned with the conservation of native and pure races of domestic animals. At the moment, its activities are focused on sheep and to a lesser extent goats. It receives a government subsidy (through the Ministry of Agriculture) with which it trains herders and provides incentives for them to participate in the program.</p> <p>The Near East Foundation currently has a base in Ouarzazate Province through which it is engaged in training of women in primary health care and utilisation of energy saving devices. Another locally based NGO, Tichka, is also engaged in similar activities as well as awareness raising programs. Morocco has at least 100 national NGOs concerned with the environment, which are grouped under an umbrella organization called CPCN (Program Committee for the Conservation of Nature).</p>	<p>These institutions will be the basis for all land use planning and integrated management of resources in the project zone. If need be, new organizations will be created, but only if based on the old. Contracts will be established between these institutions and the project for the fulfilment of responsibilities.</p> <p>ANOC will assist the project in the inventory and classification of native races of domestic animals , and once such breeds have been identified, will include the herders in the project zone into its national conservation program.</p> <p>Locally based NGOs will be given preference when sub-contracting project activities in the project zone, such as awareness raising campaigns and children’s education modules. National level NGOs will be engaged for national level awareness raising, networking and lobbying campaigns.</p>
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Private sector and other national institutions

<p>The Association of Mountain Tourism Companies is active in lobbying both the government and the tourism industry in the protection of biological and natural resources in the Mountain Zone.</p> <p>Morocco has many private sector consulting firms some of whom, such as Agro concept, have considerable experience with the conservation of biological resources, and in particular with GEF projects.</p> <p>The Agronomic and Veterinary Institute of the University of Hassan II in Rabat has several departments of relevance to the project as well as long established research programs in the areas of Ecology, Geography and Anthropology. Recently it has gained expertise in participatory planning and development. INRA (National Institute for Agronomic Research) has an ongoing program in cataloguing and ex-situ conservation of commercial native forage plants.</p>	<p>The Association will leverage co-financing for the project. It will also be actively involved in the activities of the project related to the development of the Eco-Tourism charter and the training of local tourism guides.</p> <p>Provide services for conducting baseline inventories and studies, and project monitoring, either as full sub-contracts or in association with project staff.</p> <p>The university institutions will be involved in conducting surveys and inventories for the project, either on an institutional or individual basis.</p>
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B.5 REASONS FOR EXTERNAL ASSISTANCE

The proposed project will contribute to globally beneficial biodiversity conservation by demonstrating a replicable model for the twin-benefits of sustainable use and conservation of biodiversity in the productive landscape outside of protected areas. The project site was chosen because its productive rangelands harbor globally significant and unique habitats, landscapes, flora and fauna.

The policy of the GoM is to alleviate poverty and promote national food security at the same time as conserving 5% of the territory. The policy of intensification of agriculture to sustain increased production is at present being applied indiscriminately to all ecosystems. However, there is growing recognition that in marginal arid zones, extensive livestock production is more sustainable and given the right policy support, can be economically attractive. Conservation of pastoral biodiversity is a major tenet of the new National Terrestrial Biodiversity Strategy. The GEF alternative supports this new strategic direction. The project site was chosen because it conforms to national priorities, and its customary forms of transhumance and common property management are still viable for developing a model for sustainable management of biodiversity, replicable for example to the regions of Agadir and Errachidia.

Bio-friendly transhumance will have domestic benefits, but short-term production levels will be less than what can be expected from the mono-culture pasture improvement, livestock genetic improvement, and intensive agricultural development strategies envisaged by the government. The GoM recognizes the potential long term value of transhumance, and the fact that as a sustainable use project, it will have both national and global benefits. To this effect, it is a major source of co-financing. However, GEF funding is required to cover the short term risks and remove the institutional, technological, information and economic barriers to demonstrating this innovative conservation/sustainable use approach, and its technical potential for application in other extensive pastoral lands of the world.

B.6 SPECIAL CONSIDERATIONS

Because of the focus of the baseline on intensive agriculture, mobile transhumants can be considered to be the most vulnerable and marginal group in the project area. The project's focus on this target group is expected to benefit them directly. The project does not plan to turn the clock back – it will not force settled populations to vacate their land, or redraw customary tribal territories. If land use planning and zoning are done effectively (i.e. participatory consensus, transparency) the needs of all stakeholder groups, herder and farmer, should be adequately taken care of, and compromises arrived at where necessary. The introduction of alternative livelihoods (backed, where needed, by capital financing through the Revolving Funds) should be able to cover any opportunity costs incurred through strict zoning/protection of those key habitat sites decided by the Transhumance Management Committees.

The Integrated Management Plans should be able to not only cater to the needs of the target population, but also those neighboring Secondary Fractions who have customary rights of access. This will be ensured by involving their representatives on a permanent basis in the Transhumance Management Committees, and by requiring their populations to contribute (in-kind and in-cash) to project activities, according to formulas established by the Committees. Thus potential conflicts should be minimized.

The formulation of the project (PDF-B phase) was conducted during a 6-month period with extensive consultations with all stakeholders. All relevant documents were translated into the local language and communicated in various forums to local people. A final meeting at the end of this phase between local

leaders, local government, and government technical staff arrived at a consensus on the participatory nature of the project, and the need for “ownership” of the process by local leaders.

The level of commitment shown by the GoM and local population to the project during its formulation, and their expected in-kind and cash contributions, are an important indication of the importance of the project in national and local priorities, and of the project’s political and financial sustainability. Social sustainability of the project was ensured through a participatory formulation (PDF-B), and through the Stakeholder Participation Plan (Annex 5 of the Project Brief). Institutional sustainability of the project is ensured through capacity building of government and local institutions, and improved organizational arrangements.

The project was formulated through consultations with all relevant local and national leaders and a sampling of about 15% of the villages in the project zone during a 6 month period. The project design ensures participatory planning and development during its implementation, particularly through the capacity building of the local institutions, development of participatory management plans, and training of government personnel in participatory planning. Project personnel will be given additional training in, and recruited for their experience in participatory development.

B.7 COORDINATING ARRANGEMENTS

The Provincial Technical Committee and the National Coordinating Committee, under the leadership of the Direction for Livestock, will ensure periodic supervision of the project activities. The Core Institutions (Ministries of Agriculture, Forestry, Interior and Environment) will establish a *modus operandi* specifically for this project. The Project Director will present yearly workplans to be approved by the Core Institutions, based on which specific “conventions” will be established between the Project and the Core Institutions. These conventions will specify the contributions of each party, those responsible for execution and implementation, and a monitoring and evaluation plan. Strict Performance Indicators will be developed, encompassing both the GEF Performance Indicators (Annex 2 of the Project Brief), and other indicators agreed upon by the parties and relevant to the task at hand.

In order to facilitate the implementation of activities that are undertaken by other Directions (such as rehabilitation of livestock wells by Public Works, and provision of mobile health services by Health), specific conventions will also be established between the Project and the other Directions or Divisions on a yearly basis.

B.8 COUNTERPART SUPPORT CAPACITY

The GoM is a major source of co-financing for the project. It is providing almost one-third of all financing for the project, more than half of which is in cash. These funds are allocated to the Project on the basis of cost-sharing with UNDP.

The GoM is also providing almost 48 man-years in terms of technical staff, and 84 man-years of other staff (including local agents). These are mostly staff currently available in Ouarzazate from three Core Institutions (Agriculture, Forestry and Interior), who would be re-deployed or temporarily assigned to the project. Although the technical expertise of this staff is very high, they require additional reinforcement in terms of both participatory planning and development, and biodiversity conservation (depending on the particular individual). In addition, ORMVAO will provide office space and other equipment (such as two mobile livestock anti-parasite baths, and the use of existing GIS facilities).

The Direction of Collective Lands will undertake to give priority to the project site to verify and mark any remaining boundaries of Collective Territories. This activity will be integrated and phased in after the pastoral organizations have been strengthened/established in the concerned collectives, and after the capacity building of government staff, so as to allow participatory decision-making, and reduce potential conflicts.

C. DEVELOPMENT OBJECTIVE

The project's development objective is to conserve biodiversity in the productive landscape of the southern flank of the High Atlas, through sustainable use and the revival of transhumance. By so doing, it will incorporate biodiversity conservation into both mainstream (baseline) programs, and within the local culture and practices. Simultaneous global and local benefits are expected, which would ensure both a demonstration effect and a self-sustaining local process after project completion.

D. IMMEDIATE OBJECTIVES, OUTPUTS AND ACTIVITIES

Four immediate objectives, ten outputs, and 63 activities have been identified. Annex 7 lists these activities, and provides an indicative breakdown of the total project budget per activity.

D.1 Immediate Objective 1: To design Integrated Biodiversity Conservation and Sustainable Management Plans

The threats of uncontrolled settlement and unsustainable farming will be met in the Project through the designation of areas suitable for conservation, transhumance and intensive agriculture. Zoning will secure common grazing rights for transhumants and will remove the need to settle to acquire tenure security. Intensive agriculture will be channeled into suitable agro-ecological zones and will relieve pressure from common range resources. Sensitive and vulnerable habitats and nesting sites (small scale) will be selected through participatory decisions for setting aside for strict protection. The Project will enhance local capacity for land use planning, enforcement and monitoring, and co-management of conservation sites, through the institutional integration of customary and modern systems, and the participatory development of Integrated Management Plans.

Output 1.1: Information barriers to strong local institutions and participatory management plans removed.

Responsible party: PU, sub-contractors (Institutes and NGOs)

Activity 1.1.1: Conduct a detailed inventory of biodiversity in the project zone, using a participatory format, and integrating traditional knowledge, and provide a diagnosis of potentials and constraints in terms of biodiversity loss.

Activity 1.1.2: Conduct a participatory evaluation of the strengths and weaknesses of existing local institutions, including customary and government institutions, in terms of land use planning, natural resource management, common property management, and transhumance management.

Activity 1.1.3: Conduct a detailed participatory study of local technical knowledge concerning biodiversity, transhumance, joint herding, and extensive livestock production, among all 14 fractions of the project site, and several neighboring "secondary" fractions involved with the project.

Activity 1.1.4: Conduct a technical review of the judicial status of common property regimes and local institutions in Morocco as they pertain to transhumants, and provide solutions for gaps in the legal texts.

Activity 1.1.5: Prepare and conduct participatory workshops with customary leaders of both the primary and the secondary beneficiaries, local authorities, technical staff, and other local opinion-leaders, to brainstorm on how best to strengthen existing institutions, and/or create new organizations, in line with the project's objectives. This may include the delineation of Transhumance Territories, consisting of the territories of 3-4 neighboring fractions who habitually share pastures, and the corresponding creation of "Transhumance Management Committees", composed of their customary leaders, leaders of the respective Rural Communes, and relevant government technical staff. This activity will also design the internal structures required for implementation, monitoring and evaluation of activities. "Blue-print" designs will be avoided by allowing participatory processes to culminate in institutions that are relevant to the objective at hand.

Activity 1.1.6: Organize exchange visits and study tours for leaders of local institutions over the total period of the project, to other project sites in Morocco.

Output 1.2: Various pastoral organizations created for transhumance management, land use planning and biodiversity conservation.

Responsible parties: PU, DCL, DAR, RC, and customary leaders

Activity 1.2.1: Conduct awareness raising campaigns among the public (both primary and secondary beneficiaries) on the need to establish new pastoral organizations (as decided in Activity 1.1.5), and seek their feedback and adhesion. Where necessary, establish a "membership registrar" reflecting primary and secondary beneficiary status.

Activity 1.2.2: Organize workshops with local institutions and primary and secondary public, to design the internal regulations and status of the new organizations, including common property management, access rights to pastures and biodiversity, dues and sanctions.

Activity 1.2.3: Conduct the process of democratically electing leaders and formally establishing and recognizing the new pastoral organizations within official texts.

Activity 1.2.4: Conduct a participatory review of existing Collective Territories to verify whether boundaries respond to actual needs, and to identify existing and potential sources of conflicts within and between Collectives. This activity should be a prerequisite to Activities 1.2.1 through to 1.2.3.

Activity 1.2.5: Verify and where necessary, modify, the boundaries of Collectives (work to be done by DCL).

Activity 1.2.6: Conduct a participatory diagnosis and identification of the boundaries to be established for any new pastoral organization (created in activity 1.2.3), such as the territories of the "Transhumance Management Committees". The Integrated Management Plans (below) will be based on these territories.

Activity 1.2.7: Train the leaders of the local pastoral organizations in participatory planning, accountability and transparency, with initial courses, and refresher courses during the life of the project.

Activity 1.2.8: Assist the pastoral organizations to operate and function throughout the life of the project and beyond through contributions from local population, including in-kind (labor), and in-cash (membership fees).

Activity 1.2.9: Strengthen the capacity of local authorities in 10 Rural Communes through training, and role-playing, to conduct land use planning, resolve conflicts, and enforce laws.

Output 1.3: 4-6 Integrated Transhumance and Biodiversity Management Plans designed

Responsible parties: PO, PU, ORMVAO, and sub-contractors

Activity 1.3.1: Conduct a participatory diagnosis of the benefits and constraints to transhumance, in terms of both biodiversity conservation and sustainable use, and the recent trends in mobility, sedentarization and land use, using a mixture of methods including PRAs, GIS and Remote Sensing.

Activity 1.3.2: Conduct a technical evaluation of the biodiversity status of wetlands, including their geographical distribution, condition, and land use pressures.

Activity 1.3.3: Conduct a participatory inventory of key biodiversity sites (water, salt, *agdals*, key species, etc.) and evaluation of their status (both ecological and use right) among all primary and secondary users. Select potential sites suitable for physical interventions, including: rehabilitation and creation of wells, and biodiversity rehabilitation. Collect other additional information as deemed necessary by local decision-makers and technicians for the design of Integrated Management Plans.

Activity 1.3.4: Conduct inventories of the biodiversity in the Saghro Co-Managed Reserve, using local knowledge where ever possible. Assess land use patterns in Saghro. Conduct an awareness campaign on the objectives and strategy of establishing the Co-managed Reserve, and obtain feedback necessary for designing the Management Plan for the Reserve (as part of the overall Integrated Management Plans).

Activity 1.3.5: Design the Integrated Management Plans by each Transhumance Management Committee and relevant pastoral organizations, including a general 5-year plan for biodiversity conservation, common property management, and transhumance organization, a detailed first-year workplan, and financial modalities. Establish a “contract” between the project and the Transhumance Management Committee for the implementation of the Plan.

Activity 1.3.6: Conduct an extensive participatory review of the Plan, by communicating it to the public in various forums and by various means, making sure to reach all primary and secondary beneficiaries, both transhumant and sedentary. Establish feedback loops, and revise Plans as necessary, before final validation. Establish a schedule of yearly participatory and public fora for the iterative revision of the five-year plans.

D.2 Immediate Objective 2: To implement Integrated Biodiversity Conservation and Sustainable Management Plans.

The implementation of the Integrated Management Plans will ensure that grazing pressure is dispersed over the rangelands and balanced with ecosystem dynamics and rehabilitation. Land users and government officials will be trained for co-management/conservation of the Saghro Mountain and Mgoun Peaks.

Output 2.1: Key biodiversity sites protected and Saghro Co-managed Reserve established.

Main Responsible parties: POs, PU, DREF, sub-contractors

Activity 2.1.1: Conduct a participatory survey to obtain popular consensus on the demarcation of the boundaries of “hot spots” that are to be strictly protected, including those in Saghro Co-managed Reserve and in the Mgoun Peak area. In addition, choose sites for partial (controlled) use, and sites for

rehabilitation. Use both demarcation and fencing as required to physically identify and establish gazetted hot spots.

Activity 2.1.2: Construct and equip a Visitor Center in the Saghro Co-managed Reserve, including basic infrastructure and eco-tourism material. Staff to be mostly provided by local communities.

Output 2.2: Key biodiversity sites rehabilitated.

Main Responsible parties: POs, PU, ORMVAO, DREF, sub-contractors

Activity 2.2.1: Conduct detailed studies to technically verify the potential sites selected by POs for well rehabilitation/creation, and vegetation rehabilitation, keeping in mind the main objective of a better, even dispersion of grazing pressure.

Activity 2.2.2: Rehabilitate at least 20 and create at least 5 new water points for livestock use dispersed in the landscape. Work to be done by Public Works.

Activity 2.2.3: Conduct a demonstrative trial of soil conservation and rehabilitation of vegetative cover on degraded lands using water spreading and native plant species, on about 2100 ha. of key biodiversity sites.

Activity 2.2.4: Conduct a pilot demonstration of techniques for enriching the flora in about 10 ha of key biodiversity sites (including *agdals*), using native and endemic plants. Upon successful results, ensure replication by pastoral organizations.

Activity 2.2.5: Provide technical backstopping for new techniques on soil conservation and rehabilitation of degraded lands.

Output 2.3: Common Property managed, zoning applied, and monitoring capacity enhanced

Main Responsible parties: PU, POs

Activity 2.3.1: Train men and women in the sustainable use and management (including maintenance) of livestock water points. Develop innovative herding techniques based in indigenous knowledge for greater dispersion of resource use on rehabilitated sites.

Activity 2.3.2: Using participatory techniques, develop and experiment with rest/rotation schemes for about 80,000 ha. of collective pastures. Demonstrate and disseminate successful results.

Activity 2.3.3: Conduct awareness raising campaigns and training workshops for both men and women on the concept of “people can settle, livestock must move”, and develop appropriate models for joint-herding practices between transhumant and sedentary families, for a balanced grazing pressure on biodiversity.

Activity 2.3.4: Implement other activities of the Integrated Management Plans as designed and based on participatory decisions, which directly respond to project objectives.

Activity 2.3.5: Establish a participatory monitoring capacity within pastoral organizations through training and creation of capacity.

Activity 2.3.6: Provide linkages and “client-friendly” information by the ORMVAO remote sensing/GIS system, that is useful to the daily operation and planning capacity of the Pastoral Organizations. PU to design prototypes to be implemented by ORMVAO.

Activity 2.3.7: Conduct external and independent monitoring of project activities and results, three times during project life-time. Work to be sub-contracted.

D.3 Immediate Objective 3: *To provide incentives for biodiversity conservation and transhumance.*

Land use planning will only partially address the threats of overgrazing and under-grazing. An additional package of economic, technological and training incentives is needed to encourage a balance between intensive and extensive sustainable use systems, revive livestock mobility, and enhance the long term viability of common property management systems. Rangeland user fees and receipts from Tourism will finance locally managed revolving funds to provide economic incentives for sustainable common property regimes and alternative incomes. Awareness raising activities on bio-friendly transhumance, and professionalization of shepherds, mixed with co-financed activities such as classification of native transhumant livestock and provision of mobile health and education services, will provide additional incentives to revive transhumance. To address the threats of over-exploitation of flora and fauna, awareness raising campaigns will target adults and children alike. The capacity of local authorities to monitor over-hunting and enforce hunting laws will be enhanced. Economically important native species, such as the endemic Sahara bee, will be made productive for both biodiversity conservation and sustainable income generation, to show local people that additional income can be derived from biodiversity conservation. This will also help to cover the short term economic costs of shifting to more sustainable forms of land use.

Output 3.1: Economic and institutional incentives for sustaining biodiversity conservation and transhumance demonstrated and applied.

Main Responsible Parties: PU, PO

Activity 3.1.1: Conduct an inventory of endemic Sahara Bee, analyze reasons for decline, and develop pilot models for sustainable use and alternative income generation. Work to be sub-contracted.

Activity 3.1.2: Establish Local Revolving Funds in each Pastoral Organization, where requested, using 50% membership fees, and 50% grant from UNDP. Establish systems for local control, disbursement and repayment rules (using traditional systems where possible), and auditing.

Activity 3.1.3: Establish and test a locally-controlled collective system for user fees on key sites (wells, re-vegetated pastures, etc.) for sustainable management involving both primary and secondary beneficiaries, and channel receipts to Local Revolving Funds.

Activity 3.1.4: Conduct an inventory and classification of breeds of domestic animals endemic to project site. Sub-contract.

Activity 3.1.5: Certify endemic domestic breeds, and incorporate interested herders into national conservation program. Work to be done by ANOC.

Activity 3.1.6: Develop a “pastoral manual” that incorporates both scientific and local technical knowledge. Work to be sub-contracted. Use the manual in training (activities 3.1.8 and 3.1.9), and disseminate a “user-friendly” version to shepherds in this and other projects.

Activity 3.1.7: Train 100 shepherds for improved transhumance and biodiversity conservation. Organize exchange visits between shepherds from other parts of Morocco and/or southern Europe.

Activity 3.1.8: Enhance the professionalization of shepherds, through standardization, certificates, and yearly competitions.

Activity 3.1.9: Operate two mobile anti-parasite baths, in accordance with requests from pastoral organizations, and designed to enhance even dispersion of grazing and transhumance. Work to be done by ORMVAO.

Activity 3.1.10: Train at least 100 community agents to deliver health, education and veterinary services to mobile transhumants. Work to be done by relevant Ministries.

Output 3.2: Local level awareness raised and laws enforced.

Responsible parties: PU, PO, DREF, sub-contracts

Activity 3.2.1: Develop and disseminate mass media materials on biodiversity conservation and alternatives for sustainable use in general, and on wildlife conservation in the Saghro Co-managed Reserve.

Activity 3.2.2: Build capacity of local leaders responsible for the enforcement of hunting and related laws, through training, awareness raising, and participatory brainstorming on solutions.

Activity 3.2.3: Provide education material and organize field visits for children in schools on biodiversity conservation. Work to be coordinated with Regional Office of Ministry of Education.

D.4 Immediate Objective 4: To integrate biodiversity issues into policy debate at provincial and national levels

To help reinforce transhumance and common property management in the project zone, and to create the conditions for replication elsewhere in Morocco, capacity building exercises, workshops, networking, media and policy debates will be needed. These will demonstrate the benefits of transhumant pastoralism and assist in the development of policy instruments, such as a National Pastoral Code. The potentially significant threat of tourism on globally significant mountain zones will be addressed through training of mountain guides at the Azilal School, and development of an eco-tourism charter.

Output 4.1: Provincial level awareness raised and capacity enhanced for integrating transhumance and biodiversity issues into baseline activities.

Responsible parties: PU, PTC

Activity 4.1.1: Conduct three seminars for the PTC during the life of project on integrating biodiversity conservation and revival of transhumance into mainstream regional and provincial programs.

Activity 4.1.2: Train and raise capacity of the staff of ORMVAO, DREF, Provincial Governorate, and (future) Regional Environment Representatives, on participatory planning and development, transhumance and biodiversity conservation. Sub-contracts and consultancies.

Activity 4.1.3: Develop a module and train tourist guides at Azilal School for biodiversity conservation and relevance of transhumance in the montane zone. Sub-contracts and consultancies.

Activity 4.1.4: Train DREF personnel in co-management techniques. Sub-contracts and consultancies.

Output 4.2: National level awareness raised and transhumance and biodiversity issues integrated into policy debate.

Responsible parties: PU, NCU, associated projects.

Activity 4.2.1: Conduct national level mass media campaigns on transhumance and biodiversity conservation. Sub-contracted.

Activity 4.2.2: Conduct a national comparative study of economic/ecological costs and benefits of transhumance, sedentary and other land use alternatives. Joint case studies with associated projects; the study methodology and design to be developed jointly with participating projects. Sub-contracted.

Activity 4.2.3: Develop and disseminate a “Transhumance and Biodiversity Newsletter” for the purposes of information exchange, networking and lobbying. Work to be done by a suitable national NGO.

Activity 4.2.4: Organize biannual workshops between ministries, associated projects, researchers and NGOs on the exchange of experiences. Design and organization to be jointly shared between participating projects.

Activity 4.2.5: Conduct a national study/evaluation of current transhumance patterns and trends in Morocco, and the impacts of current policies on transhumance livelihoods and production. The study methodology and design to be developed jointly with participating projects. Sub-contracted.

Activity 4.2.6: Organize national workshops with all relevant partners and international experts/observers, to draft policy guidelines and legislative frameworks for a national pastoral code.

Activity 4.2.7: Develop a “white paper” and proposal for a National Pastoral Code, based on information from activities 4.2.2, 4.2.4 and 4.2.5. Sub-contracted.

Activity 4.2.8: Organize workshops as needed to develop an eco-tourism charter, in consultation with Ministry of Tourism and private tourism companies. Sub-contracted.

E. INPUTS

E.1 GOVERNMENT INPUTS

The GoM is providing a total contribution of US\$2.71 million. Of this, US\$ 1.86 is in cash, and the remainder is in kind. Cash contribution is coming from the following sources:

- | | |
|---------------------------|------------------|
| ▪ Ministry of Agriculture | US\$1.2 million |
| ▪ Ministry of Interior | US\$ 0.3 million |
| ▪ Ministry of Forestry | US\$ 0.3 million |

Cash contribution from the Ministries to the project will be allocated on a cost-sharing basis in 2-3 installments during the first three years of the project. In addition, US\$60,000 is to be allocated to project related work by the Ouarzazate Municipal Council, as part of their Socio-Economic Program.

GoM cash contribution will be used primarily for activities that are not GEF eligible, such as construction of wells, and health/education service delivery. Annex 7 provides a breakdown of GoM contributions per activity.

GoM in kind contribution is equivalent to a total of US\$850,000. These include: personnel (equivalent of US\$643,000); office space in Ouarzazate (ORMVAO) for the Project Unit, in 10 Rural Communes for the field agents, and a meeting room in the Direction of Livestock in Rabat (total equivalent of US\$73,000); miscellaneous office furniture for the Project Unit (US\$1000); two mobile anti-parasite baths from ORMVAO (US\$20,000); and material for the delimitation of collective lands from the Direction of Collective Lands (US\$113,000).

E.2 LOCAL CONTRIBUTION

As this project is a participatory one, the contribution of the local community is expected to be substantial, not only in providing knowledge, labor and materials, but also in contributing to decision-making, and to financial arrangements. In addition, the local communities will provide access to their collective territories – but this value has not been monetized. Over the 7 years of the project, the local community is expected to contribute a total equivalent to US\$1,440,000. The majority of these funds are equivalent in kind, calculated on the basis of labor and materials provided to the project (total US\$1,275,000). The remainder (US\$165,000) is cash contribution calculated as expected membership fees and user fees. Annex 7 provides a breakdown of local contributions per activity.

E.3 UNDP/UNOPS

UNDP through its country program is expected to contribute a total amount of US\$1.234 million to the project. A first installment of US\$0.5 will be allocated from the current TRAC resources, and the remainder from the following Country Programme Cycle starting year 2002. This cash contribution will be used primarily to complement GEF and GoM co-financing, particularly in activities not eligible for GEF. They include the recruitment of national consultants and sub-contracts with institutions for activities such as classification of endemic domestic animal breeds, development of policy papers, and training in planning and transparency (see budget table).

In addition, following the new arrangements for national execution, UNDP Country Office will support the project in the following ways, after a thorough assessment of the administrative and management capacities of the national entity in charge of project execution:

- reporting on financial and substantive activities on a yearly basis
- finance/account management and direct payments
- recruitment of national project personnel, and provision of a roster of national consultants
- definition and management of training activities in planning, accountability and transparency; and
- purchase of equipment

UNOPS will support the recruitment of international personnel and procurement of non-expandable equipment where appropriate.

E.4 OTHER INTERNATIONAL CO-FINANCING (PARRALLEL FUNDING)

US Peace Corps has expressed interest in providing at least 3 volunteers during the full life of the project, equivalent to a contribution of US\$90,000. The volunteers will be either community development or biodiversity specialists, and will be used by the project for activities related to participatory planning, awareness raising, studies on local knowledge, and biodiversity inventories. The volunteers will be housed in villages, and given logistical and material support by the project and ORMVAO.

FFEM through the pipeline Ifrane Forestry Project will collaborate with the project on several activities related to exchange workshops and eco-tourism. The value of this parallel financing is expected to be US\$50,000.

Taza Project (FAO/Italy) will collaborate with the project in organizing one of the national workshops on national pastoral code (Activity 4.2.6) and preparing the Pastoral Manual. The value of this parallel collaboration is expected to be US\$25,000.

Oriental Project (IFAD) will collaborate with the project in organizing a national workshop on pastoral code. The value of this parallel collaboration is expected to be US\$15,000.

CAMELEO and ROSELT projects (funded through FFEM, EU and Ministère de la Coopération Française) will have activities in the project site implemented by ORMVAO that complement the project activities, including an ecological/biodiversity monitoring site, and enhancing GIS capabilities of ORMVAO. The equivalent contribution to these activities is considered as parallel financing, for a total of US\$457,000.

E.5 PRIVATE SECTOR CO-FINANCING

A consortium of private tourism companies, through the “Association of Tourism Companies” is interested to commit at least US\$100,000 as cost-sharing to the project for activities related to eco-tourism and sustainable development, including: rehabilitation of wells, training of people on management of common property, creation of Visitor Center at Saghro Co-Managed Reserve, national awareness raising campaigns, children’s biodiversity education programs, training of local guides, and development of an Eco-tourism Charter.

E.6 GEF INPUTS

GEF overall contribution to the project is valued at US\$4.369.4m, which includes: PDF-B Formulation, Project Evaluation, Project Support Services, and incremental costs of Activities. Incremental Costs cover all GEF eligible activities, such as training, developing pilot tests and models, biodiversity inventories and collection of native seeds, and gazetting of the Co-managed Reserve. Many of these activities will be carried out as sub-contracts with NGOs and research institutions, such as development of mass media communication materials, and development of training activities and manuals.

In addition, GEF funds will cover personnel (three nationally recruited project staff, in addition to 103 m-m of national consultants and 12 m-m of international consultants). National and international consultants will only be recruited as complements to the capabilities of project staff. GEF funds will also cover: field allowances for project staff and field agents over 7 years to adequately follow transhumance; office materials and equipment including tent/camping equipment and a total of 6 vehicles and their maintenance and operation over 7 years.

F. RISKS AND ASSUMPTIONS

Experience shows that working with transhumants requires more investment in awareness raising and capacity building (both government and local people) to ensure effective participatory development, and a higher percentage of administrative costs (primarily for transportation and communication), than working

with sedentary populations. In addition, major droughts are estimated to occur every 8 years, and moderate droughts every 3 years in the project zone.

One critical assumption of the project is that species are able to recover from past over-exploitation and under-grazing, given the interventions of the project. Chances of successful recovery are high in this project, because the time frame chosen (7 years) should adequately cover both drought cycles and regrowth requirements of plants.

Another critical assumption is that current government commitment to the project, policies and reforms will continue to be favorable for a revival of transhumance, and there will be a continuation of existing national willingness to support transhumance and dryland biodiversity conservation in mountain zones. The GoM's firm commitment to provide cost-sharing contributions to support the project is already secured, and the first tranche of these contributions has already been allocated. In addition, the government recently has indicated willingness to increase its national contributions to the project, which implies an additional firm commitment.

In addition, it is expected that political conditions will remain stable in the project zone, and that turnover of provincial staff will not be harmful to project objectives. It is also assumed that GoM, NGOs and other partners will disseminate positive project results to other arid, pastoral regions of Morocco.

At the local level, it is assumed that the process of creation of institutions will be conducted with democratic principles and will not be co-opted by elite. Local institutions and leaders are expected to be able to mediate effectively between interest groups to arrive at compromises and joint solutions.

One of the assumptions pertains to the long-term viability of project activities of revolving fund and bee keeping. The PDF-B implementation phase indicates these activities have been negotiated and designed through participatory discussions with local communities in the project site. These discussions revealed the presence of locally managed trials with grazing fees in improved pasture in Morocco, which are considered to establish basis for economic viability of a revolving fund activity, replenished by grazing fees, in the long term. In addition, demand for honey production in Morocco encourages local beneficiaries to invest in bee keeping activities, thereby ensuring viability. Co-financing capitalized by 50% UNDP and 50% local membership fees, user fees, receipts, etc will secure core resources for the revolving fund to complement land use planning and natural resource management.

G. PRIOR OBLIGATIONS AND PREREQUISITES

A "convention" or agreement will be established and signed between the four core Ministries (Agriculture, Forestry, Interior, and Environment) that will indicate the following:

- The specific financial contributions of each ministry to the project, and schedule of disbursement
- The specific in-kind contributions of each ministry to the project
- The specific activities that each ministry will take the lead on
- Modalities for cooperation, supervision, reporting and accountability

UNDP will reserve the right to suspend disbursement of fund if the above obligations are not met or are violated.

H. PROJECT REVIEWS, REPORTING AND EVALUATION

The project will monitor its activities and disseminate its results in many ways. It will build the capacity of local people and leaders to conduct participatory monitoring and auto-evaluation of needs and activities. It will also conduct its own internal monitoring of the impacts, with yearly evaluations by the Provincial and National Coordination Committees. Finally, the project will sub-contract an independent operator three times during project lifetime to monitor and evaluate social and physical indicators using strict biodiversity performance criteria.

The reports and results of the project will be disseminated not only to local people, but also to the various supervising committees. In addition, workshops and seminars at the national and provincial level will share the project's experiences with other pastoral projects and government programs. Project networking to be done through these workshops and a Pastoral Newsletter (that would eventually be run by a local NGO) would help to ensure that experiences from elsewhere also feed into the project.

The language barrier will be lifted by ensuring that all project reports (progress and evaluation) are translated into Arabic for dissemination to local leaders, and into "user-friendly" versions for local people. A summary of the PDF-B has already been translated into a User-friendly version and disseminated during the formulation process.

Current UNDP project monitoring and reporting strategies (Tripartite Project Review, Annual Program/Project Review, Mid Term and Final Independent Reviews), will be applied and complemented by GEF M&E procedures such as the annual Project Implementation Review (PIR). Annex 2 provides the schedule of project reviews, reporting and evaluation.

I. 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 the Morocco and the United Nations Development Programme, signed by the parties on 13 May 1982. 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.

The following types of revisions may be made to this Project Document with the signature of the UNDP Resident Representative only, provided he or she is assured that the other signatories of the Project Document have no objections to the proposed changes:

1. Revision in, or addition of, any of the annexes of the Project Document.
2. 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.
3. Mandatory annual revisions that rephrase the delivery of agreed project inputs or increased expert of other costs due to inflation or take into account agency expenditure flexibility.

J. BUDGET – MOR/99/G33/A/1G/99

1 GEF Contributions

		TOTAL	YEAR 1		YEAR 2		YEAR 3		YEAR 4		YEAR 5	
EM	M/M	\$	M/M	\$	M/M	\$	M/M	\$	M/M	\$	M/M	\$
i. PROJECT PERSONNEL												
.50 Intern. Consult.												
.51 Drylands biodiversity	4	60,000	1	15,000	1	15,000	0.5	8,000	0.5	7,000	0.5	8,000
.52 Participatory/pastoral	5	75,000	3	45,000	1	15,000	1	15,000				
.53 Reserve Co-management	3	45,000	1	15,000	2	30,000						
.99 subtotal	12	180,000		75,000		60,000		23,000		7,000		8,000
ii. Monitoring and Evaluation												
i.01 Eval mission		80,000						80,000				
i.02 Eval mission		80,000										80,000
i.03 Final eval.		80,000										
.99 subtotal		240,000						80,000				80,000
iii. Mission Costs												
		400,000		70,000		70,000		70,000		60,000		50,000
iv. NPPP												
.01 National Director	84	280,000	12	40,000	12	40,000	12	40,000	12	40,000	12	40,000
.02 Participation	84	210,000	12	30,000	12	30,000	12	30,000	12	30,000	12	30,000
.03 Gender	84	210,000	12	30,000	12	30,000	12	30,000	12	30,000	12	30,000
.50 National consult												
.51 Biodiversity	4	20,000	4	20,000								
.52 Pastoral Institutions	6	30,000	3	15,000	3	15,000						
.53 Pastoralist/Range manag	15	75,000	3	15,000	3	15,000	3	15,000	3	15,000	3	15,000
.54 Land use economist	5	25,000	5	25,000								
.55 Communication	14	70,000	1	5,000	3	15,000	2	10,000	2	10,000	2	10,000
Soil cons/veg. Rehab	3	15,000			1	5,000	2	10,000				

.57 Partic. Planning w/ pastor	9	45,000	4	20,000	3	15,000	2	10,000				
.58 Lawyer, Common propert	2	10,000	2	10,000								
.59 Planner, transparency	8	40,000	4	20,000	1	5,000	1	5,000	1	5,000	1	5,000
.99 Subtotal	318	1,030,000	62	230,000	50	170,000	46	150,000	42	130,000	42	130,000
Component total	330	1,850,000	62	305,000	50	230,000	46	253,000	42	137,000	42	218,000
i. SUBCONTRACTS												
.01 Sust. Use of bees		30,000				15,000		15,000				
.02 Inventory Native livestock		80,000				40,000		40,000				
.03 Pastoral manual		50,000		25,000		25,000						
.04 Ecol/econ. Study		20,000		10,000		10,000						
.05 National transh. Survey		20,000		10,000		10,000						
.06 Draft pastoral policy		20,000						10,000		10,000		
.07 Eco-tourism charter		45,000						9,000		9,000		9,000
.08 Gazette SIBE		30,000				30,000						
.09 Const, equip Visitor Centr		90,000				30,000		30,000		30,000		
.10 Children's education		84,000		21,000		21,000		21,000		21,000		
.11 Detailed site selection/TA		15,000		15,000								
.12 Local knowl/econ/land use		35,000		20,000		15,000						
.13 Partic.eval.past.inst/bound		25,000		15,000		10,000						
.14 Biod studies/inventories		71,000		25,000		25,000		21,000				
.15 National awareness raising		155,000						31,000		31,000		31,000
.16 Independent monitoring		150,000				50,000				50,000		
Component total		920,000		141,000		281,000		177,000		151,000		40,000
j. TRAINING												
. Study tours/group training/workshops												
.01 Exchange visits for locals		34,000		6,000		6,000		6,000		6,000		6,000
.02 Awareness raising mtgs		152,000		32,000		20,000		20,000		20,000		20,000
.03 Train leaders in plan/acc		30,000		5,000		5,000		5,000		5,000		5,000

0.04 Train resource users		36,000			6,000		6,000		6,000		6,000
0.05 Train leaders in monit/GIS		30,000			6,000		6,000		6,000		6,000
0.06 Train shepherds		56,000			6,000		10,000		10,000		10,000
0.07 Train leaders in enforcemt		20,000			5,000		5,000		5,000		5,000
0.08 Train tourist guides		10,000							10,000		
0.09 Provincial staff		45,000	8,000		6,000		5,000		5,000		5,000
0.10 DREF Staff		50,000	10,000		10,000		10,000		10,000		10,000
0.11 Partic. Local organizations		20,000	20,000								
0.12 Partic. Design local Organ.		20,000	10,000		10,000						
0.13 Studies/mtgs Manag Plans		40,000			20,000		20,000				
0.14 Provincial seminars		3,000	1,000				1,000				1,000
0.15 National exchange		24,000			4,000		4,000		4,000		4,000
0.99 Subtotal		570,000	92,000		104,000		98,000		87,000		78,000
Component total		570,000	92,000		104,000		98,000		87,000		78,000
0. EQUIPMENT											
0.01 Awards, competitions		50,000					10,000		10,000		10,000
0.02 Ecol inventory/survey tools		20,000	20,000								
0.03 Seeds/natural materials		20,000	20,000								
0.04 Misc (fencing, unforeseen)		20,000	20,000								
0.05 Vehicles, 4x4	6	200,000	3 100,000						3 100,000		
0.06 camping equipment		20,000	20,000								
0.07 Radios/communication		30,000	30,000								
0.08 GPS	2	2,000	2,000								
0.09 Computers, printers	10	86,000	6 66,000						4 20,000		
0.10 O&M of vehicles		210,000	30,000		30,000		30,000		30,000		30,000
0.11 Office utilities/supplies		70,000	10,000		10,000		10,000		10,000		10,000
0.99 Subtotal	18	728,000	9 318,000		40,000		50,000		7 170,000		50,000
Component total	18	728,000	9 318,000		40,000		50,000		7 170,000		50,000
0. MISCELLAENOUS											
0.01 Reporting costs		35,000	5,000		5,000		5,000		5,000		5,000

i.01 Newsletter (NGO)		49,000		7,000		7,000		7,000		7,000		7,000
i.02 Sundries		100,000		20,000		20,000		20,000		10,000		10,000
i.99 subtotal		184,000		32,000		32,000		32,000		22,000		22,000
Component total		184,000		32,000		32,000		32,000		22,000		22,000
<hr/>												
i. GRAND TOTAL		4,252,000										
<hr/>												

J.2 UNDP Contributions

ITEM	TOTAL		YEAR 1		YEAR 2		YEAR 3		YEAR 4		YEAR 5	
	M/M	\$	M/M	\$	M/M	\$	M/M	\$	M/M	\$	M/M	\$
20. SUBCONTRACTS												
20.02 Inventory Native livestock		20,000				10,000		10,000				
20.03 Pastoral manual		45,000		25,000		20,000						
20.04 Ecol/econ. Study		30,000		15,000		15,000						
20.05 National transh. Survey		40,000		20,000		20,000						
20.06 Draft pastoral policy		20,000						10,000		10,000		
20.07 Eco-tourism charter		10,000						5,000		5,000		
20.10 Children's education		40,000		10,000		10,000		10,000		10,000		
20.11 Detailed site selection/TA		30,000		15,000		15,000						
20.12 Local knowl/econ/land use		30,000		15,000		15,000						
20.13 Partic.eval.past.inst/bound		40,000		20,000		20,000						
20.15 National awareness raising		200,000						40,000		40,000		40,000
20.17 Soil cons/veg rehab		74,000				20,000		20,000		10,000		10,000
20.18 Judicial review past inst		10,000		10,000								
20.19 Cons/rehab wells		110,000				22,000		22,000		22,000		22,000
29.00 Component total		699,000		130,000		167,000		117,000		97,000		72,000
30. TRAINING												
32. Study tours/group training												
32.01 Exchange visits for locals		33,000		3,000		6,000		6,000		6,000		6,000
32.02 Awareness raising mtgs		40,000		10,000		10,000		10,000		10,000		
32.03 Train leaders in plan/acc		40,000		8,000		8,000		8,000		8,000		8,000
32.06 Train leaders in monit/GIS		30,000						6,000		6,000		6,000
32.07 Train shepherds		20,000				4,000		4,000		4,000		4,000

32.08 Train leaders in enforcemt		10,000			2,000	2,000	2,000	2,000
32.11 Train Community agents		66,000			11,000	11,000	11,000	11,000
32.12 Train local auth in conflict		20,000	10,000		10,000			
32.99 subtotal		259,000	31,000		51,000	47,000	47,000	37,000
33. IN SERVICE TRAINING								
33.01 Provincial staff		50,000			10,000	10,000	10,000	10,000
33.99 subtotal		50,000			10,000	10,000	10,000	10,000
34. WORKSHOPS								
34.01 Partic. Local organizations		3,000	1,000		2,000			
34.02 Partic. Design local Organ.		55,000	30,000		25,000			
34.05 Provincial seminars		10,000	4,000			3,000		3,000
34.06 National exchange		40,000			8,000	8,000	8,000	8,000
34.07 National pastoral code		30,000			10,000		10,000	
34.99 subtotal		138,000	35,000		45,000	11,000	18,000	11,000
35. NEWSLETTER (NGO)								
		15,000	3,000		2,000	2,000	2,000	2,000
39. Component total		462,000	69,000		108,000	70,000	77,000	60,000
40. EQUIPMENT								
41. Expendable equipment								
41.01 Awards, competitions		10,000				2,000	2,000	2,000
41.04 Seeds/natural materials		8,000				8,000		
41.06 Capital for Revolv Funds		45,000			20,000	25,000		
41.07 for mobile parasite baths		10,000			2,000	2,000	2,000	2,000
49. Component total		73,000			22,000	37,000	4,000	4,000
99. GRAND TOTAL		1,234,000	199,000		297,000	224,000	178,000	136,000

J.3 Government In-Cash Contributions¹⁵

ITEM	TOTAL		YEAR 1		YEAR 2		YEAR 3		YEAR 4		YEAR 5	
	M/M	\$	M/M	\$	M/M	\$	M/M	\$	M/M	\$	M/M	\$
20. SUBCONTRACTS												
20.01 Sust. Use of bees		27,000				14,000		13,000				
20.02 Inventory Native livestock		20,000				10,000		10,000				
20.03 Pastoral manual		15,000		5,000		10,000						
20.04 Ecol/econ. Study		20,000		10,000		10,000						
20.05 National transh. Survey		30,000		15,000		15,000						
20.06 Draft pastoral policy		14,000						7,000		7,000		
20.07 Eco-tourism charter		20,000						4,000		4,000		4,000
20.08 Gazette SIBE		20,000				20,000						
20.09 Const, equip Visitor Centr		40,000				20,000		20,000				
20.10 Children's education		109,000		16,000		16,000		16,000		16,000		15,000
20.11 Detailed site selection/TA		15,000		15,000								
20.12 Local knowl/econ/land use		40,000		20,000		20,000						
20.13 Partic.eval.past.inst/bound		40,000		20,000		20,000						
20.14 Biod studies/inventories		34,000		14,000		10,000		10,000				
20.15 National awareness raising		50,000						10,000		10,000		10,000
20.17 Soil cons/veg rehab		82,000				20,000		20,000		20,000		20,000
20.18 Judicial review past inst		20,000		10,000		10,000						
20.19 Cons/rehab wells		200,000				40,000		40,000		40,000		40,000
20.20 ANOC classif livestock		17,000						7,000		10,000		
20.21 Delimit Collective boundary		10,000		5,000		5,000						
29.00 Component total		823,000		130,000		240,000		157,000		107,000		89,000

¹⁵ Government in-kind contributions are calculated at \$0.85m.

30. TRAINING									
32. Study tours/group training									
32.01 Exchange visits for locals	30,000	5,000	5,000	5,000	5,000	5,000	5,000		
32.02 Awareness raising mtgs	60,000	10,000	10,000	10,000	10,000	10,000	10,000		
32.03 Train leaders in plan/acc	130,000	20,000	20,000	18,000	18,000	18,000	18,000		
32.04 Train resource users	10,000		2,000	2,000	2,000	2,000	2,000		
32.06 Train leaders in monit/GIS	65,000		13,000	13,000	13,000	13,000	13,000		
32.07 Train shepherds	20,000		4,000	4,000	4,000	4,000	4,000		
32.08 Train leaders in enforcemt	5,000		1,000	1,000	1,000	1,000	1,000		
32.10 Train tourist guides	22,000					11,000	11,000		
32.11 Train community agents	244,000		44,000	40,000	40,000	40,000	40,000		
32.12 Train local auth in conflict	12,000	6,000	6,000						
32.99 subtotal	598,000	41,000	105,000	93,000	104,000	104,000	104,000		
33. IN SERVICE TRAINING									
33.01 Provincial staff	20,000	3,000	3,000	3,000	3,000	3,000	3,000		
33.02 DREF Staff	10,000	2,000	2,000	2,000	2,000	2,000	2,000		
33.03 subtotal	30,000	5,000	5,000	5,000	5,000	5,000	5,000		
34. WORKSHOPS									
34.01 Partic. Local organizations	7,000	7,000							
34.02 Partic. Design local Organ.	17,000	9,000	8,000						
34.04 Studies/mtgs Manag Plans	63,000	10,000	20,000	20,000	13,000				
34.05 Provincial seminars	5,000	2,000		2,000			1,000		
34.06 National exchange	10,000		2,000	2,000	2,000	2,000	2,000		
34.07 National pastoral code	80,000		27,000		26,000				
34.99 subtotal	182,000	28,000	57,000	24,000	41,000	3,000	3,000		
35. NEWSLETTER (NGO)	15,000	3,000	2,000	2,000	2,000	2,000	2,000		
39. Component total	825,000	77,000	169,000	124,000	152,000	114,000	114,000		

40. EQUIPMENT												
41. Expendable equipment												
41.01 Awards, competitions		30,000					6,000		6,000			6,000
41.04 Seeds/natural materials		10,000			5,000		5,000					
41.05 Misc (fencing, unforeseen)		122,000		42,000	40,000		40,000					
41.07 for mobile parasite bath		50,000					10,000		10,000			10,000
41.99 subtotal		212,000		42,000	45,000		61,000		16,000			16,000
49. Component total		212,000		42,000	45,000		61,000		16,000			16,000
99. GRAND TOTAL		1,860,000		249,000	454,000		342,000		275,000			219,000

J.4 Local Contributions (In-Cash)¹⁶

ITEM	TOTAL		YEAR 1		YEAR 2		YEAR 3		YEAR 4		YEAR 5	
	M/M	\$	M/M	\$	M/M	\$	M/M	\$	M/M	\$	M/M	\$
20. SUBCONTRACTS												
20.01 Sust. Use of bees		3,000					1,000		1,000			1,000
20.22 User fees for range resources		69,000					13,000		14,000			14,000
29.00 Component total		72,000					14,000		15,000			15,000
30. TRAINING												
32. Study tours/group training												
32.11 User fees community agents		5,000					1,000		1,000			1,000
39. Component total		5,000					1,000		1,000			1,000
40. EQUIPMENT												
41. Expendable equipment												
41.06 Capital for Revolv Funds		69,000					13,000		14,000			14,000
41.07 user fees for mobile parasite bath		19,000					3,000		4,000			4,000
49. Component total		88,000					16,000		18,000			18,000
99. GRAND TOTAL		165,000		0		0	31,000		34,000			34,000

¹⁶ Local in-kind contributions (\$1.275m) are calculated on the basis of labor and materials provided to the project

J.5 US Peace Corporations Contributions:

ITEM	TOTAL		YEAR 1		YEAR 2		YEAR 3		YEAR 4		YEAR 5	
	M/M	\$	M/M	\$	M/M	\$	M/M	\$	M/M	\$	M/M	\$
20. SUBCONTRACTS												
20.12 Local knowl/econ/land use		60,000		15,000		15,000		15,000		15,000		
20.14 Biod studies/inventories		10,000		5,000		5,000						
29.00 Component total		70,000		20,000		20,000		15,000		15,000		
30. TRAINING												
32. Study tours/group training												
32.06 Train leaders in monit/GIS		15,000		5,000		5,000		5,000				
34. WORKSHOPS												
34.04 Studies/mtgs Mgmt Plans		5,000				3,000		2,000				
39. Component total		20,000		5,000		8,000		7,000		0		
99. GRAND TOTAL		90,000		25,000		28,000		22,000		15,000		

J.6 Other Contributions

a. Private Sector

ITEM	TOTAL		YEAR 1		YEAR 2		YEAR 3		YEAR 4		YEAR 5	
	M/M	\$	M/M	\$	M/M	\$	M/M	\$	M/M	\$	M/M	\$
20. SUBCONTRACTS												
20.07 Eco-tourism charter		10,000						2,000		2,000		2,000
20.09 Cons/equip Visitor center		10,000				4,000		3,000		3,000		
20.10 Children's education		10,000				2,000		2,000		2,000		2,000
20.15 National awareness raising		25,000						5,000		5,000		5,000
20.19 Cons/rehab wells		10,000				5,000		5,000				
29.00 Component total		65,000				11,000		17,000		12,000		9,000
30. TRAINING												
32. Study tours/group training												
32.02 Awareness raising mtgs		20,000		3,000		3,000		3,000		3,000		3,000
32.04 Train resource users		5,000						1,000		1,000		1,000
32.10 Train tourist guides		10,000								5,000		5,000
39. Component total		35,000		3,000		3,000		4,000		9,000		9,000
99. GRAND TOTAL		100,000		3,000		14,000		21,000		21,000		18,000

Other International Contributions

ITEM	TOTAL		YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
	M/M	\$	M/M \$	M/M \$	M/M \$	M/M \$	M/M \$
<i>CAMALEO PROJECT</i>							
30. TRAINING							
32.06 Train leaders in monit/GIS		96,000		16,000	16,000	16,000	16,000
99. GRAND TOTAL		96,000		16,000	16,000	16,000	16,000
<i>ROSELT PROJECT</i>							
20. SUBCONTRACTS							
20.12 Local knowl/econ/land use		10,000	10,000				
30. TRAINING							
32.06 Train leaders in monit/GIS		351,000	51,000	50,000	50,000	50,000	50,000
99. GRAND TOTAL		361,000	61,000	50,000	50,000	50,000	50,000
<i>TAZA PROJECT</i>							
20. SUBCONTRACTS							
20.03 Pastoral Manual		10,000	5,000	5,000			
20.05 National Transh. Survey		5,000	3,000	2,000			
34. WORKSHOPS							
34.07 National pastoral code		10,000		10,000			
99. GRAND TOTAL		25,000	8,000	17,000			
<i>ORIENTAL PROJECT</i>							
20. SUBCONTRACTS							
20.05 National Transh. Survey		5,000	3,000	2,000			
34. WORKSHOPS							

34.07 National pastoral code	10,000								10,000		
99. GRAND TOTAL	15,000		3,000		2,000				10,000		

K. ANNEXES

ANNEX I PROJECT WORKPLAN

Project Intervention	Year 1			Year 2			Year 3			Year 4			Year 5			Year 6	
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2
1. IMMEDIATE OBJECTIVE: Integrated biodiversity conservation and sustainable management plans.																	
1.1. Output: Information barriers removed																	
Activity 1.1.1: detailed biodiversity inventory in project zone																	
Activity 1.1.2: evaluation of existing local institutions																	
Activity 1.1.3: Document local knowledge																	
Activity 1.1.4: judicial status																	
Activity 1.1.5 participatory workshops																	
Activity 1.1.6: exchange visits and study tours																	
Output 1.2: Various pastoral organizations created																	
Activity 1.2.1: awareness raising campaigns																	
Activity 1.2.2: workshops on regulations, CPR, access rights,																	
Activity 1.2.3: electing leaders and pastoral organizations																	
Activity 1.2.4: review of Collective Territories																	
Activity 1.2.5: boundaries of Collectives																	
Activity 1.2.6: boundaries for any new pastoral organization																	
Activity 1.2.7: Train leaders in participatory planning, etc.																	
Activity 1.2.8: pastoral organizations operate and function																	
Activity 1.2.9: Strengthen capacity of local authorities																	
Output 1.3: 4-6 Integrated Transhumance and Biodiversity Management Plans designed)																	
Activity 1.3.1: diagnosis of transhumance benefits & constraints																	
Activity 1.3.2: technical evaluation of wetlands																	
Activity 1.3.3: participatory inventory of key biodiversity sites																	
Activity 1.3.4: inventories of biodiversity in Saghro Reserve																	
Activity 1.3.5: Design Integrated Management Plans																	
Activity 1.3.6: extensive participatory review of Plans																	
2. Immediate Objective 2: Implement integrated biodiversity conservation and sustainable management plans																	
Output 2.1: Key biodiversity sites protected and Saghro Co-																	

Project Intervention	Year 1			Year 2			Year 3			Year 4			Year 5			Year 6	
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2
managed Reserve established.																	
Activity 2.1.1 demarcation of boundaries of hot spots																	
Activity 2.1.2: Visitor Center in the Saghro Reserve,																	
Output 2.2: Key biodiversity sites rehabilitated.																	
Activity 2.2.1 studies on wells and vegetation rehabilitation																	
Activity 2.2.2: Rehabilitate 20 and create 5 new water points																	
Activity 2.2.3: water spreading and native plant species																	
Activity 2.2.4: techniques for enriching the flora in about 10 ha																	
Activity 2.2.5: techniques on soil conservation and rehabilitation of degraded lands																	
Output 2.3: Common Property managed, zoning applied, and monitoring capacity enhanced																	
Activity 2.3.1: Training on use and maintenance of water points.																	
Activity 2.3.2 rest/rotation schemes for about 80,000 ha.																	
Activity 2.3.3: awareness/training-people settle, livestock move																	
Activity 2.3.4: Implement other activities of Management Plans																	
Activity 2.3.5 monitoring capacity within pastoral organizations																	
Activity 2.3.6: linkages/information with ORMVAO RS/GIS																	
Activity 2.3.7: independent monitoring of project activities																	
3. IMMEDIATE OBJECTIVE: To provide incentives for biodiversity conservation and transhumance																	
Output 3.1: Economic and institutional incentives																	
Activity 3.1.1: inventory of endemic Sahara Bee																	
Activity 3.1.2: Local Revolving Funds																	
Activity 3.1.3: locally-controlled collective system for user fees																	
Activity 3.1.4: inventory of endemic domestic animals																	
Activity 3.1.5: Certify endemic domestic breeds																	
Activity 3.1.6 pastoral manual																	
Activity 3.1.7: Train 100 shepherds																	
Activity 3.1.8: Enhance the professionalization of shepherds																	
Activity 3.1.9: Operate two mobile anti-parasite baths																	
Activity 3.1.10: Train community agents on health, education																	
Output 3.2: Local level awareness raised and laws enforced.																	
Activity 3.2.1: Develop and disseminate mass media materials																	
Activity 3.2.2: Build capacity for enforcement of hunting																	
Activity 3.2.3: education material for children																	
4. IMMEDIATE OBJECTIVE: Integrate biodiversity issues																	

Project Intervention	Year 1			Year 2			Year 3			Year 4			Year 5			Year 6	
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2
into policy debate at provincial and national levels																	
Output 4.1: Provincial level awareness																	
<u>Activity 4.1.1: three seminars for the PTC during the project</u>																	
<u>Activity 4.1.2: raise capacity of the staff of ORMVAO, etc.</u>																	
<u>Activity 4.1.3: Develop a module and train tourist guides</u>																	
<u>Activity 4.1.4: Train DREF personnel</u>																	
Output 4.2: National level awareness																	
<u>Activity 4.2.1: Conduct national level mass media</u>																	
<u>Activity 4.2.2: national comparative study</u>																	
<u>Activity 4.2.3: Transhumance and Biodiversity Newsletter</u>																	
<u>Activity 4.2.4: biannual workshops</u>																	
<u>Activity 4.2.5: evaluation of current transhumance patterns</u>																	
<u>Activity 4.2.6: workshops-policy guidelines and legislative FW</u>																	
<u>Activity 4.2.7: white paper and proposal for a National Pastoral Code</u>																	
<u>Activity 4.2.8: workshops as needed on eco-tourism charter</u>																	

ANNEX II. PROJECT REVIEW REPORTING AND EVALUATION

Activity/Report	Year 1			Year 2			Year 3			Year 4			Year 5			Year 6	
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2
Inception report	•																
Monthly Progress Reports	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Quarterly Financial Reports	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Annual Progress Report (APR)			•			•			•			•			•		
Independent Evaluation								•						•			
Project Implementation Review (PIR)					•			•			•			•			•
Terminal Report																	

ANNEX III. LIST OF NON-EXPENDABLE EQUIPMENT

Mobile livestock anti-parasite baths

Communication radios

Vehicles, 4x4

Camping equipment

Radios

Communication systems

GPS

Computers

Printers

Scanners

Telephone/Fax Machines

ANNEX IV TOR OF NATIONAL PROJECT MANAGER

1. National Project Manager

The National Project Manager, under the overall direction of the National Implementing Agency, will be responsible for the day-to-day management and timely execution of agreed planned activities, co-ordinate with project and international staff, and participating national institutions. In particular the Project Manager will be responsible for:

- Drawing up, in consultation with project staff the National Project Coordinator, the detailed Annual Project Work Plans and budgets;
- Keeping financial and monitoring records for required project reporting;
- Preparing Annual Performance Reviews, Project Implementation Reviews, and Impact Reports for submission to the UNDP Country Office and the National Project Co-ordinator
- Overall planning and management of the implementation of project activities;
- Formulate detailed job descriptions and define scope of work for project staff and consultants, and participate in hiring and selection process under UNDP guidelines;
- Liase with organisations participating in the project and ongoing programmes relevant to the project and local village leaders in the project sites;
- Ensuring that data arising from the activities of the project conform with agreed project wide methodologies and formats;
- Calling and acting as the secretary to the National Project Steering Committee and technical meetings, preparing the agenda and other required documentation;
- Follow up with Ministries and legislative bodies regarding the consideration of socio-economic policies, legal frame works proposed by the project;

Required qualifications of the National Project Co-ordinator

- Fluency in English, French and Arabic;
- Eight years experience in project financial and other resources co-ordination and management;
- At least an advanced degree with experience in pastoral management or any related fields of plant biodiversity management
- Familiarity with the national socio-economic and political context.
- Proven ability to chair meetings with senior executives, present cases and negotiate with government authorities.
- Experience in the use of participatory approaches with local communities.

Duration and Post Location:

The Project Manager will be recruited for the whole project period (7 years) and will be based on project site (Ouarzazate).

ANNEX V: STAKEHOLDER PARTICIPATION PLAN

1. Stakeholder participation in, and more importantly, “ownership” of the project is a critical element for ensuring the long term sustainability of the results of the project in the target area. The previous UNDP Projet Haut Atlas Central project, although on a smaller scale than the present project, has initiated an excellent basis for stakeholder participation. Local communities and governments are now familiar with the concept, and would not accept anything less.

2. Stakeholder “ownership” of the GEF project plan has been achieved as far as a 6-month participatory formulation process (PDF-B) can allow. Local leaders have been consulted either in public meetings, or individually. Logical Framework Exercises have been conducted with all relevant government officials and experts both at the national level and in Ouarzazate. A two-month PRA exercise was conducted in a sample of 30 villages (the sample chosen during a meeting with local leaders). During this exercise, several key stakeholder groups were consulted: herders, livestock owners (if different than the former), women, and customary leaders. As a result of these various exercises, the objectives and activities of the proposed project were refined, and several new elements added.

3. During this PDF-B process, all customary leaders and government officials and experts have been not only consulted but also asked to make key decisions, such as:

- establishment of locally managed revolving fund to be capitalized by 50% UNDP and 50% local membership fees, user fees, etc.
- list of Rural Communes, tribes and sub-tribes to be included as primary target areas
- list of tribes and sub-tribes to be considered as secondary participants (particularly those transhumant tribes that frequently use the project area)
- objectives and outputs of the project
- level of commitment of each stakeholder group to the project
- experimenting the introduction of socially acceptable, fair and equitable fee based system in the use of rehabilitated resources including water and pasture

4. As a result of these meetings, customary leaders have congratulated the project formulators publicly for involving them in the decision making, and have expressed their strong desire in front of government officials, for the full project to continue to do so.

STAKEHOLDER IDENTIFICATION

5. Stakeholder groups who will benefit directly from the full project are expected to be herders/shepherds and their mobile families, livestock owners, women who use natural resources, children, and customary leaders at the local level. These groups will benefit from physical interventions, training and awareness raising, and increased financial resources. The primary target is the 14 Fractions directly involved with the project, however, neighboring Fractions who have customary relations with the target population will also benefit by having their use rights protected, being involved in decision making, and using rangeland improvements.

6. Provincial government and ministry staff and national ministry staff will benefit from training and capacity building. National Research/Development Institutions (whether academic or NGO) will benefit from sub-contracts. A national NGO will benefit from training and assistance to establish a Newsletter.

7. The target population of at least four other ongoing and pipeline associated projects are expected to benefit indirectly from the project, through joint activities and dissemination of results.

8. Another important stakeholder group that has expressed an interest in the project is the private Tourism Sector, particularly those companies involved with Trekking and Tourism in the Atlas Mountains.

The twin aims of (a) conservation and sustainable use of the resources in the Mountains, and (b) training tourism guides and developing an Eco-Tourism Charter, are of sufficient interest for them to have promised co-financing.

INFORMATION DISSEMINATION AND CONSULTATION

9. In addition to consultations already done during the PDF-B process, the full project will emphasize capacity building of local leaders and institutions where ever deemed necessary in order to ensure that the process of project implementation is participatory. Capacity building for, and regular public meetings on, participatory monitoring and evaluation are also a key feature of the proposed project. The project design is flexible enough to allow changes in activities as a result of feedback from consultation with all sources. In particular, two major elements will ensure this flexibility:

Integrated Management Plans, which are developed through a relatively long (even up to 2-year) participatory process, are a means by which target populations and other stakeholders can ensure that their needs are adequately met;

Revolving Funds established through co-financing, that will allow the local communities to decide and fund activities that have not been envisaged by the project document, but which still fall under the main objectives of the project.

10. Participatory planning is a major tool of the project, and is an ongoing process. Critical points during project implementation at which consultations are crucial, and categories of groups represented in these consultations are:

Signing of “conventions” that establish project workplans	between Heads of Rural Communes, local leaders, and project between relevant government entities and project
Establishment of the specific design for the creation of pastoral institutions	Brainstorming workshops with local leaders and government experts
Integrated Management Plans	Dissemination through mass media techniques and public meetings for obtaining feedback and final acceptance by population of 14 Fractions and neighboring Fractions
Implementation of Management Plans	Public meetings with population of 14 Fractions and other “Secondary” Fractions to establish level of commitment (financial, physical) and respect of rules
Drafting of National Pastoral Code and Eco-Tourism Charter	Series of expert panels and planning workshops with national level ministry staff, using provincial and project staff as technical assistance, complemented with awareness raising campaigns and lobbying efforts at the national level

11. The language barrier will be lifted by ensuring that all project reports (progress and evaluation) are translated into Arabic for dissemination to local leaders, and into “user-friendly” versions for local people. A summary of the PDF-B has already been translated into a User-friendly version and disseminated during the formulation process.

12. The reports and results of the project will be disseminated not only to local people, but also to the various supervising committees (see Implementation Arrangements). In addition, workshops and seminars at the national and provincial level will share the project’s experiences with other pastoral projects and government programs. Project networking to be done through these workshops and a Pastoral Newsletter (that would eventually be run by a local NGO) would help to ensure that experiences from elsewhere also feed into the project.

STAKEHOLDER PARTICIPATION

13. The key customary leaders involved with the project are the *Siyukh* (Tribal leaders), *Naib* (representatives of the Fraction who sit on Government Panels), *Qaid* (Government appointed representatives that interface with the Tribes), and Chiefs of *Agdals* (customary reserves). These four categories of leaders represent not only their office, but will also sit on any new pastoral organization created through the project. This may include the “Transhumance Management Committees” which are intended to be a grouping of 3-4 Fractions, in order to facilitate collective decision-making concerning rangeland management and conservation.

14. The Provincial Technical Committee, an existing technical supervisory body, is another institution of relevance to the project. It includes not only government officials, but also elected representatives of the Rural Communes. It will be involved in supervising and disseminating the results of the project.

15. Stakeholder participation will be sustained throughout the project life by ensuring that:

- project staff are recruited for their knowledge of participatory development and provided additional training and resources to effectively deal with the specific requirements of participatory planning and development among mobile transhumant populations
- government staff are trained in participatory planning and development
- capacity of customary leaders is raised for planning, accounting, and transparency
- local “ownership” of project activities is shown not only by in-kind contribution, but also cash contribution where necessary (user fees, membership fees).

16. The latter three points are also expected to ensure sustainability of stakeholder participation beyond project life.

SOCIAL AND CRITICAL ISSUES

17. Because of the focus of the baseline on intensive agriculture, mobile transhumants can be considered to be the most vulnerable and marginal group in the project area. The project’s focus on this target group is expected to benefit them directly. The project does not plan to turn the clock back – it will not force settled populations to vacate their land, or redraw customary tribal territories. If land use planning and zoning are done effectively (i.e. participatory consensus, transparency) the needs of all stakeholder groups, herder and farmer, should be adequately taken care of, and compromises arrived at where necessary. The introduction of alternative livelihoods (backed, where needed, by capital financing through the Revolving Funds) should be able to cover any opportunity costs incurred through strict zoning/protection of those key habitat sites decided by the Transhumance Management Committees.

18. The Integrated Management Plans should be able to not only cater to the needs of the target population, but also those neighboring Secondary Fractions who have customary rights of access. This will be ensured by involving their representatives on a permanent basis in the Transhumance Management Committees, and by requiring their populations to contribute (in-kind and in-cash) to project activities, according to formulas established by the Committees. Thus potential conflicts should be minimized.

ANNEX VI: BACKGROUND TO THE NEW PARADIGM ON TRANSHUMANCE

Since the early 1990s there has been increasingly vocal concern from both researchers and pastoralists worldwide that *transhumance*, or seasonal mobility of livestock between different pastures, is not receiving the recognition that it deserves as a tool for sustainable use of rangelands. A fortuitous coincidence of theoretical advances in several related fields (ecology, anthropology, economics, political science), has highlighted the myths and unnecessary biases against extensive livestock production, and presented conclusions in the framework of a “new paradigm for pastoral development” that have completely turned around the old pastoral development paradigm¹⁷. At the same time, a spontaneous resurgence of transhumance worldwide has occurred in a wide range of countries: from southern Europe (notably Spain and France), to Mongolia and other former communist countries. However in Africa and Asia, the socio-political and economic environment has not only constrained transhumance to the point that most pastoralists have abandoned this vocation, but it has also made it difficult for a similar spontaneous resurgence to occur.

Of particular relevance to biodiversity conservation and the CBD is that transhumance:

is a production system adapted to sustainable use of arid lands that simultaneously benefits globally significant biodiversity
by generating local and domestic economic benefits it is self-sustaining, and therefore does not need continual external support for biodiversity conservation and sustainable use (projects, trust funds)
is a repository of traditional knowledge which the CBD is mandated to protect

Some of the more important and influential myths that the new paradigm on transhumance has debunked include: irrational economic behavior, the overgrazing controversy, and the equilibrium nature of the arid ecosystem. Pastoralists do not “hoard” animals, as it was previously thought. In the absence of insurance schemes and timely credit, they are forced to hold onto a large herd size because:

the cyclic droughts in arid lands create “boom and bust” situations and herders need to have enough female animals surviving the drought in order to regenerate their herds after the drought;
the extreme ecosystem variability makes livestock productivity (milk, meat) very erratic. Depending on the ecosystem, mixture of animals, and availability of alternative income, the average pastoral household needs a minimum of 20-40 livestock units (LSU) just to survive¹⁸. In many countries of Africa at the moment, including the Maghreb, the majority of pastoralists are below the threshold of survival.

The overgrazing controversy has been behind such widespread policies as sedentarization and settlement, destocking, and gazetting of rangelands. The old paradigm, based on the Classical Range Management theories of the 1930's, believes that high livestock pressure is the most important factor in shaping the ecosystem. Land degradation, it follows, is a direct result of overgrazing. The new paradigm recognizes that both over grazing and under grazing can be detrimental to the ecosystem. The new paradigm looks at the extreme variability in arid and semi-arid ecosystems (coefficient of variation of annual rainfall exceeding 30%), and after decades of monitoring these ecosystems concludes that livestock is not the only, or even the major factor affecting drylands. In many cases the erratic rainfall (both in space and in time) is a far more important factor.

The extreme variability in abiotic factors, particularly the extremely high coefficient of variability (such as in the project site) do not allow vegetation communities and primary productivity to reach an equilibrium

¹⁷ See for example Behnke, R., I. Scoones & C. Kerven, eds. 1993, *Range Ecology at disequilibrium*, ODI, IIED, Commonwealth Secretariat, London; Ellis, J.E., M.B. Coughenour & D.M. Swift 1993. “Climate variability, ecosystem stability and the implications for range and livestock development”, pp.31-41 in Behnke, R., I. Scoones & C. Kerven, eds. 1993 *ibid.*; Steinfeld, H., C. de Haan & H. Blackburn., 1997 *Livestock – environment interactions: issues and options*. FAO, USAID, World Bank; Niamir, M. 1997, *Proceedings of 4th International Technical Consultations on Pastoral Development*, UNSO.

¹⁸ Dahl, G. & Hjort, A. 1976. *Having herds: pastoral herd growth and household economy*, Stockholm University, Dept. of Anthropology, Stockholm. Sanford, S. 1982. “Pastoral strategies and desertification: opportunism and conservatism in drylands”, pp. 61-80 In *Desertification and Development: Dryland ecology in social perspective* ed. B. Spooner & H. Mann, Academic Press, London. Niamir 1997. *op.cit.*

point. The ecosystem may tend toward an equilibrium point, but it is highly unlikely to reach it. Patterns of vegetation change are discernible, but they are not predictable with high certainty. Secondary productivity (both wild and domestic animals) therefore has to adjust to this uncertainty.

The new paradigm contends that land management and land use systems that are flexible enough to mimic the variability in rainfall are far more suited to the sustainable use of rangelands. Western concepts of average productivity (biomass per hectare) and carrying capacity are ill suited to capturing the highly variable and non-equilibrium nature of the ecosystem. Transhumant use of the rangelands, such as among the Berber of the High Atlas, is based on a daily monitoring of the patchiness and variability of primary production, and regulated according to frequency and dispersion of use, rather than based on biomass/ha. Transhumance and extensive, dispersed, livestock mobility (i.e. different forms of rotation adapted to the variability and uncertainty) therefore are better management systems than sedentary, concentrated land use patterns. Berber communities surveyed during the PDF-B formulation mission repeatedly affirmed this principle.

Recent historical studies show that overgrazing has occurred almost entirely in areas subjected to rapid and massive sedentarization or in areas where public water points have been open access to all, thus encouraging a high concentration of animals in a small space for a short time¹⁹. Sedentarization not only concentrates grazing pressure and reduces the area that animals can effectively use, but it also reallocates labor needed for proper herding to crops. In response, many households revert to supplemental feeding of semi-settled animals using imported or homegrown feeds. The provision of subsidized feeds by the GoM in the 1960s to 1980s was a major incentive for settlement by the Berber. However, the lack of capitalization means that intensively raised animals cannot survive solely on stall-feeding, and must also use the surrounding rangelands. This in turn increases the grazing pressure in the immediate surroundings of the settlement. The phenomenon of over-concentration linked to subsidized feed has been noted in all North African countries that followed similar policies²⁰. Land degradation as a result of concentration of animals is linked directly to biodiversity loss.

The new paradigm states that only through dispersing the animals and matching their mobility to ecosystem variability can overgrazing be reduced. Sedentarization and reduced mobility of livestock also lead to under-grazing in remote pastures. Most arid ecosystems have evolved over thousands of years with domestic and wild ruminants. Many of the grass and shrub species not only have adaptive features that allow them to regenerate after grazing/browsing, but also are dependent on grazing in order to regenerate faster than other competing plants. Under-grazed plant communities that are grazing dependent very quickly lose their integrity, heterogeneity and health. During the PDF-B formulation mission, Berber transhumants identified areas they considered as deteriorated due to undergrazing. The project will ensure that these are included in the Integrated Management Plans, and monitored.

The link between transhumance and sustainable land use also has positive implications for biodiversity conservation *per se*. The new paradigm says that not only is improved transhumance sustainable, but it is also “biodiversity friendly”. By dispersing livestock pressure and reducing overgrazing to an environmentally sustainable level, transhumance can lead to less land degradation, less habitat transformation, and therefore less biodiversity loss. The new paradigm states that under-grazing is a problem for biodiversity conservation as well. The dryland ecosystems (their plants, soils and vegetation) have evolved under the influence of a variable climate and mobile, extensive, domestic livestock grazing for millennia. Traditionally, livestock herds were mixtures of herbivores with different dietary requirements that ensured an evenly distributed pressure over all plant species. Therefore there were less chances of one or a few plant species dominating the community and reducing its diversity.

¹⁹ Thébaud, B. 1988. *Elevage et développement au Niger*, ILO, Geneva. + Hellden, U. 1991. “Desertification – time for an assessment”, *Ambio*, 20:372-383.

²⁰ El-Shorbaghy, M.A. 1998. “Impact of development programmes on deterioration of rangeland resources in some African and Middle Eastern countries”, pp. 45-70 in Squires, V.R. & A.E.Sidahmed, eds. *Drylands: sustainable use of rangelands into the twenty-first century*, IFAD, Rome.

Long term monitoring shows that under-grazing of arid rangelands actually results in a lowering of both biodiversity and soil cover²¹. The thousands of exclosures across Africa that were set up in the 1960's and 1970's have not resulted in a spontaneous return of the forest (the "climax" vegetation as the old paradigm claims) but in many cases have resulted in a deterioration of the vegetation community.

Dryland vegetation communities and individual plant species have developed adaptive mechanisms that allow them not only to persist, but also to be genetically and biologically diverse. The distinct mammals, birds and other wildlife of the drylands have also been part of this co-evolution.

The Berber herders have a vested interest in maintaining a high level of biodiversity because they are dependent on a wide range of natural resources – forage, medicinal and shade plants. A traditional herd made up of a mixture of livestock species with different diets needs a diverse set of plants and resources. It is only with specialization and mono-cropping that this dependence on biodiversity is lost. The genuine support proffered by the Berbers to the project during the PDF-B, and their spontaneous discussion of benefits of transhumance to biodiversity conservation attest to this fact.

The proponents of the Classical Paradigm have claimed that the new paradigm advocates a return to "backward" nomadic systems without significantly developing or improving it. Intensification of livestock production can be an option – after all that has been the most widespread approach in industrialized countries – but the tremendous negative environmental impacts of such intensification are only now being felt (pollution, new forms of diseases)²³. The new Paradigm supports the view that people can settle in arid lands (as long as its negative effects can be reduced), but livestock have to move. The Berber herders also insisted, during the PDF-B, that accompanying measures are necessary to ensure that transhumance is "modernized". They singled out in particular: training of shepherds in new methods of range monitoring and use, mobile social services, and conservation of native (transhumant) livestock breeds. Transhumance can be seen as a short-term strategy of encouraging a flexible adaptation to ecosystem variability, which will evolve spontaneously if given the right support, through policy and legal reform at the national level, and improved/appropriate technologies at the local level.

²¹ Perevolotsky, A. 1995 "Conservation, reclamation and grazing in the Northern Negev: contradictory or complementary concepts?" *Pastoral Development Network*, no.38a 1-22.

²² Partly to blame is the general desiccation and reduction in average rainfall that has occurred since the 1950's. However, if this trend in climatic desiccation is to continue, then our expectations of drylands has to be revised.

²³ Steinfeld *et.al.* 1997. *op.cit.*

ANNEX VII **DETAILED PROJECT FINANCING**

COMPONENT	OUTPUT	ACTIVITY	GoM & LOCAL CO-FINANCING	OTHER CO-FINANCING	GEF INCREASE
1. Local and traditional institutions strengthened to Design integrated Biodiversity Conservation and Sustainable Management plans	1.1 Information Barriers to strong local institutions and management plans removed	1.1.1 Participatory inventory and diagnosis of biodiversity in project zone	21,000	10,000	105,000
		1.1.2 Participatory evaluation of strengths and weaknesses of local institutions	55,000	20,000	50,000
		1.1.3 Participatory study of local technical knowledge of transhumance, joint-herding and extensive livestock production	43,000	80,000	85,000
		1.1.4 Technical review on judicial status of local institutions and common property regimes	30,000	10,000	
		1.1.5 Participatory workshops on definition of new organizations	18,000	3000	75,000
		1.1.6 Exchange visits and study tours for leaders of local institutions (over 5 years)	44,000	33,000	72,000

	TOTAL OUTPUT 1.1		211,000	156,000	387,000
	1.2 Various	1.2.1 Awareness raising and	152,000	40,000	167,000
	Pastoral	membership registration			
	Organizations				
	Created for	1.2.2 Participatory design of	44,000	55,000	125,000
	Transhumance	internal regulations and status of			
	Management,	pastoral org., Revolving Funds			
	land use planning				
	and biodiversity	1.2.3 Election of leaders and	15,000		
	Conservation	official establishment of pastoral			
		organizations			
		1.2.4 Participatory review of	27,000	10,000	
		existing boundaries of			
		Collectives and identification of			
		existing and potential sources			
		of conflicts			
		1.2.5 Verification and	133,000		
		modification of Collective			
		boundaries where necessary			
		(contingency funds)			
		1.2.6 Participatory diagnosis	45,000	10,000	81,000
		and identification of Transhumance			
		Territories for Management Plans			
		1.2.7 Training of leaders in	187,000	40,000	177,000
		participatory planning,			
		accountability and transparence			

		(initial and yearly refresher courses, + exchange visits)			
		1.2.8 Operation and functioning of pastoral organizations (over 5 years)	151,000		
		1.2.9 Strengthening capacity of Local Authorities in 10 Rural Communes to resolve conflicts	23,000	20,000	
		TOTAL OUTPUT 1.2	777,000	175,000	550,000
	1.3 4-6 Integrated Transhumance and Biodiversity Management Plans designed	1.3.1 Participatory diagnostic study of the benefits and constraints of transhumance in terms of both biodiversity and sustainable use, and recent trends in mobility, sedentarization and land use	31,000	20,000	92,000
		1.3.2 Technical evaluation of biod. status/condition of wetlands	20,000		121,000
		1.3.3 Participatory Inventory and evaluation of key biod sites, site selection for water points, veg rehabilitation, and additional information required for management plans	49,000	5000	111,000

		1.3.4 Inventories and studies on biodiversity/use of Saghro Co-management Reserve	25,000		179,000
		1.3.5 Design of Management Plans by pastoral organizations and Transh Management Comm. including 5-year workplan, financial modalities and “contract” with project	21,000		60,000
		1.3.6 Participatory review and validation of Management Plans; mass communication techniques	48,000		115,000
		TOTAL OUTPUT 1.3	194,000	70,000	678,000
		TOTAL COMPONENT 1	1,182,000	401,000	1,615,000
2. Participatory	2.1 Key	2.1.1 Boundary demarcation and gazetting of sites within Saghro Co-management Reserve and Mgoun Mtn, where necessary	23,000		130,000
Implementing of Integrated Management plans For biodiversity Conservation and Sustainable use	biodiversity sites protected and Saghro Co-manged Reserve established				
		2.1.2 Creation of Visitor Center, basic infrastructure, and eco-tourism material for Co-management Reserves	53,000	10,000	140,000
		TOTAL OUTPUT 2.1	76,000	10,000	270,000

	2.2 Key	2.2.1 Detailed studies for even	28,000	30,000	10,000
	biodiversity sites	dispersion of grazing pressure			
	rehabilitated	and sites selected for rehabilitation			
		2.2.2 Rehabilitation of 20 and	263,000	120,000	
		creation of 5 dispersed water			
		points for extensive livestock			
		2.2.3 Soil conservation and	875,000	74,000	30,000
		vegetation cover rehabilitated in			
		2100 ha of key biodiversity sites			
		using water spreading and native			
		species			
		2.2.4 Pilot demonstration of	41,000	8000	10,000
		techniques for enriching flora of			
		10 ha. key biodiversity sites			
		(including agdals) and			
		replication of results by pastoral			
		organizations (130 ha)			
		2.2.5 Technical advice on soil	13,000		50,000
		conservation and vegetation			
		biodiversity rehabilitation			
	TOTAL OUTPUT 2.2		1,220,000	232,000	100,000
	2.3 Common	2.3.1 Training men and women	39,000	5,000	86,000
	property managed	for sustainable			

	zoning applied,	management of water points			
	and monitoring	and dispersion of grazing			
	capacity enhanced				
		2.3.2 Participatory development	35,000		35,000
		and implementation of			
		rest/rotation schemes for 80,000			
		ha. of collective pastures			
		2.3.3 Awareness raising on	38,000		60,000
		concept of “people can settle,			
		livestock must move” and			
		development of joint-herding			
		practices for balanced grazing			
		pressure on biodiversity			
		2.3.4 Implementation of other	133,000		70,000
		actions of the Management			
		Plans based on participatory			
		decisions, that have clear			
		global benefits			
		2.3.5 Establishment of	121,000	45,000	105,000
		monitoring capacity in pastoral			
		organizations (training and			
		operation)			
		2.3.6 Linking participatory	20,000	447,000	60,000
		monitoring with ORMVAO			
		remote sensing monitoring			
		system for use by Pastoral			
		Organizations			

		2.3.7 Sub-contracting project monitoring (x3)			150,000
		TOTAL OUTPUT 2.3	386,000	497,000	566,000
		TOTAL COMPONENT 2	1,682,000	739,000	936,000
3. Providing Incentives for Sustaining Biodiversity Conservation and Transhumance	3.1 Economic and institutional incentives for biodiversity conservation and transhumance demonstrated and applied	3.1.1 Inventory and model for sustainable use of sahara bee	46,000		30,000
		3.1.2 Establishment of Revolving Funds	79,000	45,000	
		3.1.3 Collective system for sustainable management of key sites established by each pastoral organization and functioning (user fees and tourism gate fees)	74,000		
		3.1.4 Inventory and classification of endemic breeds of domestic animals	36,000	20,000	130,000
		3.1.5 Certification of local races and incorporation into national conservation program	27,000		
		3.1.6 "Pastoral Manual" developed and distributed	25,000	55,000	70,000

		3.1.7 Training of 100 shepherds for transhumance and biodiversity conservation	36,000	20,000	106,000
		3.1.8 Professionalization of herders (competitions, standards)	41,000	10,000	60,000
		3.1.9 Operation of 2 mobile drenching units	99,000	10,000	
		3.1.10 Training of community agents for delivery of health, education and veterinary services to mobile transhumants	260,000	66,000	
		TOTAL OUTPUT 3.1	723,000	226,000	396,000
	3.2 Local level	3.2.1 Mass media materials developed on biodiversity awareness raised and laws enforced	23,000	20,000	100,000
		conservation and on Saghro Co- Managed Reserve			
		3.2.2 Capacity building of local leaders responsible for the enforcement of hunting and other laws	19,000	10,000	30,000
		3.2.3 Children's education on wildlife conservation in local schools, and local population	122,000	50,000	134,000

		awareness raising			
		TOTAL OUTPUT 3.2	164,000	80,000	264,000
		TOTAL COMPONENT 3	887,000	306,000	660,000
4. Biodiversity	4.1 Provincial level	4.1.1 Seminars held on	15,000	10,000	3,000
Issues integrated	awareness	biod conservation and			
Into policy debate	raised and	transhumance for the Provincial			
At provincial and	capacity	Technical Committee (x3)			
National levels	enhanced for				
	integrating biod-	4.1.2 Capacity of ORMVAO and	30,000	50,000	106,000
	iversity issues into	Eaux et Foret, Ministries of			
	baseline actions	Interior and Environment			
		staff raised on			
		participatory planning and			
		development, transhumance and			
		biodiversity			
		4.1.3 Development of module	32,000	10,000	10,000
		and training of eco-tourism			
		guides at Provincial Azilal School			
		4.1.5 Eaux et Foret staff training	20,000		100,000
		for co-management			
		TOTAL OUTPUT 4.1	97,000	70,000	219,000
	4.2 National level	4.2.1 Mass media campaigns on	60,000	225,000	215,000
	awareness	transhumance and biodiversity			
	raised and				

	transhumance and	4.2.2 Comparative study of	30,000	30,000	69,000
	biodiversity issues	economic and environmental			
	integrated into	costs/benefits of transhumance,			
	policy debate	sedentary, and other alternatives			
		4.2.3 Transhumance and	18,000	15,000	49,000
		Biodiversity Newsletter			
		4.2.4 Biannual workshops	20,000	40,000	74,000
		between Ministries, projects and			
		researchers on exchange of			
		experiences, networking and			
		development guidelines			
		4.2.5 National study on	40,000	50,000	60,000
		transhumance patterns and			
		trends, and impact of current			
		policies			
		4.2.6 National/international	90,000	50,000	
		workshops			
		to draft policy/legislation on			
		National Pastoral Code (x3)			
		4.2.7 Development of white	14,000	20,000	20,000
		paper and proposal for			
		National Pastoral Code			
		4.2.8 Eco-tourism Charter	30,000	25,000	95,000
		developed			

	TOTAL OUTPUT 4.2		302,000	450,000	582,000
TOTAL COMPONENT 4			399,000	520,000	801,000
		Evaluation Missions (X3)			240,000
TOTAL ALL COMPONENTS			4,150,000	1,971,000	4,252,000
		PDF-B			117,400
TOTAL PROJECT			4,150,000	1,971,000	4,369,400

Table 1. Project site and fractions

Primary beneficiaires

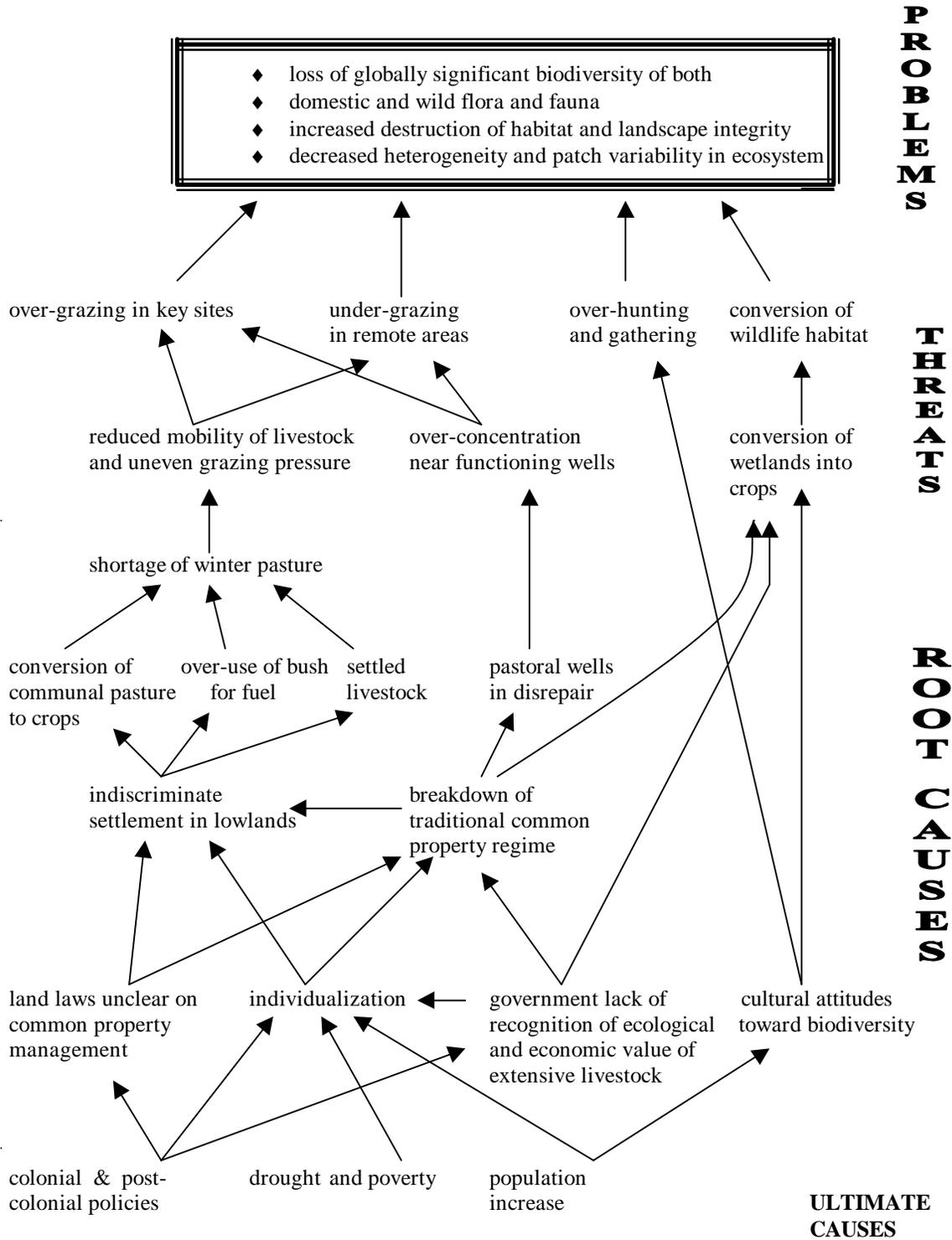
Tribe	Fractions	Rural Communes
Imeghrane	Igarnane	Ghassate
	Aït Ougrou	
	Aït Zaghrar	Imil Oulaoun
	Aït Affane	
	Kantola	
	Aït Witfao	Toundout
	Toundout	
	Aït Zekri	Skoura
Mgouna	Ouzirhint	Ighil Mgoun
	Aït Ahmed	
	Aït Mraou	
Aït Sedrate	Aït Sedrate Sahel	Aït Sedrate Sharkia
		Aït Sedrate Gharbia
	Aït Sedrate Jebel	Aït Sedrate Jebel Soufla
		Aït Sedrate Jebel Eloulia

Secondary Beneficiaries

Aït Atta	to be determined	(Zagora Province)
Aït Bou Oulli	to be determined	(Azilal Province)
Aït Bouwgmmaz	to be determined	(Azilal Province)

ANNEX E: ROOT CAUSE DIAGRAM AND MATRIX

Figure 1: Schematic representation of threats to biodiversity in the southern flank of the Central High Atlas Mountains



ORGANIGRAM OF THE GEF/UNDP HIGH ATLAS PROJECT

