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GEFSEC Project Tracking System

Response Due Date: 06/09/98

Correspondence Description

Addressed to: Kanta Kumari

Correspondence Date: 05/29/98

Date Received: 05/29/98

Organization: UNDP

From: Inger Andersen

Assigned To: K. Kumari

Status: Open

Type: Fax

Topic: MS PROJECT: SUDAN: Conservation and Management of Habitats and Species, and Sustainable Community Use of Biodiversity in Dinder National Park

Action Instructions

- ☐ For Bilateral meeting
- ☐ For information only. No action needed.
- ☐ Please handle/respond on behalf of Mr. Kenneth King and provide a copy.
- ☐ Please handle/respond on behalf of Mr. Mohamed El-Ashry and provide a copy.
- ☐ Please prepare a draft response and return to Program Coordinator
- ☐ Please reply directly and provide a copy.
- ☒ Please review and/or technical comments

Special Instructions

These are comments to Kanta's additional request for info (refer to May 28 response).

Information Copies Sent To:

M. Ramos, H. Mishra, M. Cruz, P. Diakite

Projects File Room Location:

Note: A copy/original of the document is being sent directly to your attention.

Please return this page with a copy of the incoming correspondence and the reply/action taken to Program File Manager (GEFSEC Project File Room) before or by due date with the original copy of the correspondence and the reply/action.

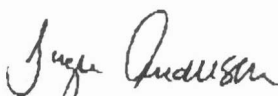
**UNITED NATIONS
DEVELOPMENT PROGRAMME**

U N D P

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**FAX NO:
DATE: 29 May 1998
FILE: SUD/DINDER**

**TO: Ms. Kanta Kumari
Environmental Specialist
GEF Secretariat**


**FROM: Inger Andersen
Regional GEF Coordinator
RBAS**

NUMBER OF PAGES (INCLUDING THIS SHEET):

25

SUBJECT: Your comments dated 28 May to Sudan/Dinder proposal

Further to our telephone conversation of today's date and further to your fax of 28 May, please find herewith enclosed the project brief into which the following changes have been made:

- The reference to FAO as being well suited to being the executing agency has been incorporated on page 18 of the project brief.
- With respect to execution it is not standard practice to explain within a project brief the reasons why a particular execution modality is not chosen. As mentioned over the phone after extensive dialogue with the Government have we reached an agreement that they should not execute the project. From UNDP's side, we made an assessment of execution capacity, financial management ability, monitoring capacity, etc. and we found that the Government was not the best suited to undertake execution of this project. I trust that this explanation will suffice.

- 2 -

- The second issue raised in your fax of 28 May may be based on a misunderstanding of the text. There is **no** refugee problem in Eastern Sudan at present. It is indeed true, that there was an extensive refugee problem during the 1970s and 1980s at the time of the war of independence between (now independent) Eritrea and Ethiopia. However, with the creation of Eritrea, the refugee problem has long disappeared.

The text on page 13 makes references to West African nomadic herders who transit the African continent in search of pastures for their herds. The text was unclear, and has subsequently been edited to make it clear that these are **not** refugees, but transhumants who are seeking to graze their herds within the established national park. The project will work with these mobile communities, to seek to establish better grazing agreements and nomadic corridors, which will more easily facilitate limitation of the trespassing into the park.

Finally, and in anticipation of your inquiry with respect to project implementability in the Sudan, UNDP would like to assure the GEF Secretariat that UNDP is actively implementing a very large Country Programme, which for 1997-1999 is at the US\$ 40 million mark. The UNDP programme in northern Sudan focuses on Area Development Schemes, which address poverty issues at the local level, working directly with local communities. The "area development" approach is also being introduced in the southern part of the country, in the form of "Area Rehabilitation Schemes". In addition, UNDP's programme supports basic education, especially for girls, renewable energy (biomass, wind and solar), and natural resource management activities, especially community based projects to combat desertification.

In view of the active UNDP programme mentioned above, it is considered that the present Medium Sized Project is fully implementable, with UNDP's on-the-ground presence in the Sudan which will be well able to address any risks which might be associated with a project such as the present one.

I trust that this address the concerns raised and look forward to receiving notification of the CEO's endorsement.

With my very best regards

MEDIUM-SIZED PROJECT BRIEF

PROJECT SUMMARY

1. Project Name: Conservation and Management of Habitats and Species, and Sustainable Community use of Biodiversity in Dinder National Park - Sudan.	2. GEF Implementing Agency: <i>UNDP</i>
3. Country or countries in which the project is being implemented: Sudan	4. Country eligibility: Sudan <i>ratified the Biodiversity Convention on 30 October 1995</i>
5. GEF focal areas(s): Biodiversity Land degradation	6. Operational program/short-term measure: Operational Programme Number 1
7. Project linkage to national priorities, action plans, and programs: This project conforms with the environmental objectives stated in the Ten-years Comprehensive National Strategy (CNS) 1992 -2002 for Sudan, which calls for the protection and regeneration of the environment and encourages communities to participate in maintaining the natural ecological balance that guarantees sustainable outputs from land and natural resources	
8. GEF national operational focal point and date of country endorsement: Mr. Amin Salih Yasin , Technical Assistance Department, Ministry of Finance and National Economy, endorsed on 11 February 1998	
Project rationale and objectives: <u>Goal:</u> <i>To conserve globally significant biodiversity and remove root barriers in Dinder National Park</i> <u>Objectives:</u> <ul style="list-style-type: none"> <i>Preservation of biodiversity in the Dinder National Park by encouraging species conservation and the sustainable use of resources through the integration of local communities in the utilization and management of natural resources.</i> 	<ul style="list-style-type: none"> <u>Indicators:</u> <i>Species diversity / species richness</i> <i>Participation in the park management and commitment of local communities towards nature conservation.</i> <i>Increased commitment of Local Government towards sustainable management of natural resources.</i>

<p>10. Project outcomes:</p> <ul style="list-style-type: none"> • <i>Development of a well articulated Management Plan for biodiversity conservation and integration of local communities into the park's resource</i> • <i>Implementation of the Management Plan in close collaboration with local communities in addition to the control of nomadic trespassing and incidental fires in the park.</i> • <i>Development of Land Use Plan for the three involved states and management of the buffer zone.</i> • <i>Development of park's infrastructure</i> • <i>Monitoring of the biodiversity conservation.</i> 	<p>Indicators:</p> <ul style="list-style-type: none"> • <i>Density of trees and shrubs, condition of riverine and wetlands habitat, floral density of understory, extent of burned areas of the park, reintroduced species.</i> • <i>Ability of local community to undertake planned activities and ability to reap financial benefits from the park on sustainable basis;</i> • <i>Cooperation between local communities and game wardens;</i> • <i>Increased commitment of the Local and Federal Government to initiate and implement sustainable Land Use Plans.</i> • <i>Adoption of monitoring outcomes to improve park management.</i> 												
<p>Project activities to achieve outcomes (including cost in US\$ or local currency of each activity):</p> <ul style="list-style-type: none"> • <i>Planning, data collection and preparation of the Management Plan US\$ 62,000</i> • <i>Implementation of the Management Plan US\$ 602,000</i> • <i>Management of the buffer zone US\$ 577,000</i> • <i>Infrastructure development of the park US\$ 409,000</i> • <i>Development of monitoring system US\$ 50,000</i> 	<p>Indicators:</p> <ul style="list-style-type: none"> • Participatory Integrated Management Plan prepared • Alternative livelihood system for sustainable resource use implemented • Management Plan for the buffer zone developed and implemented. • 1500 ha community woodlots established • Working and living conditions inside the park improved. • Monitoring system including specific set indicators and parameters for biodiversity conservation developed • 												
<p>12. Estimated budget (in US\$ or local currency):</p> <table> <tr> <td>Project preparation</td><td>US\$ 60,000 (UNDP funded)</td></tr> <tr> <td>1. GEF:</td><td>US\$ 750,000</td></tr> <tr> <td>2. Co-financing: UNDP</td><td>US\$ 500,000</td></tr> <tr> <td>3. Co-financing : FAO (TCP)</td><td>US\$ 450,000</td></tr> <tr> <td>TOTAL: (1+2+3)</td><td>US\$ 1,700,000</td></tr> <tr> <td>Government (in-kind)</td><td>(US\$ 150,000 equivalent)</td></tr> </table>		Project preparation	US\$ 60,000 (UNDP funded)	1. GEF:	US\$ 750,000	2. Co-financing: UNDP	US\$ 500,000	3. Co-financing : FAO (TCP)	US\$ 450,000	TOTAL: (1+2+3)	US\$ 1,700,000	Government (in-kind)	(US\$ 150,000 equivalent)
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<p>13. Information on project proposer: Higher Council for Environment and Natural Resources (HCENR): mandated as focal point for global conventions and their overall implementation.</p>													

14. Information on proposed executing agency : Food and Agriculture Organization of the United Nations (FAO) with a worldwide mandate and expertise in wild life management. IUCN will be involved in a sub-contractual arrangement to provide technical consultants including technical backstopping as appropriate

15. Date of initial submission of project concept: *No project concept was submitted.*

16. Project Identification number:

17. Implementing Agency contact person: Ms. Inger Andersen, Regional GEF Coordinator, Regional Bureau for Arab States, UNDP

18. Project linkage to Implementing Agency program(s): This project is perfectly in line with UNDP's sustainable human development (SHD) mandate. This has been clearly reflected in the Country Cooperation Framework (CCF) prepared jointly by UNDP and the Government for the period 1997-2001. The CCF sets the outlines for the UNDP programme in the Sudan and advocates the use of UNDP resources in the areas of poverty, environmental regeneration, job creation and gender equity.

PROJECT DESCRIPTION

PROJECT RATIONALE AND OBJECTIVES

Dinder National Park lies along the border with Ethiopia and serves as a vital habitat for terrestrial migratory species which spend the dry season in the park. It is at the cross-road of the Afro-tropical and palmeric-desertic biogeographic zones which continuously trans-conserves a border ecosystem between the two countries as well acting as carbon sink. The park has a high level of biodiversity with over 250 types of birds, 27 species of large mammals some of which are listed by the IUCN as endangered, vulnerable or threatened species, in addition to an unknown number of smaller mammals. The park also gives refuge to a large number of migratory birds in the wetlands ecosystem.

The wetlands in the park form an important ecosystem, serving not only as diverse wildlife habitats but also as a vital source of food for livestock. Successful rehabilitation of this ecosystem will serve as a model to be replicated in other parts of East Africa, where there is a low productivity of rangelands. The project will encourage the application of simple and low cost technology in revitalizing these ecosystems. A good example will be the use of doom palm leaves in the cottage industry will demonstrate the value of the palm and enhance the role of women in sustainable use of natural resources.

This project fully accords with the Operational Programme Number 1 for Arid and Semi Arid Zone Ecosystems. It falls within the priorities identified in the set of guidelines produced by the Conference of Parties (COP) in its first meeting, in particular points a and b of the guidelines give priority to:

- (a) Projects that promote the conservation and sustainable use of biological diversity and vulnerable areas such as arid and semi-arid.
- (b) Projects that promote the conservation and/or sustainable use of endemic species.

In its third meeting, the COP requested the GEF to support capacity building for indigenous and local communities embodying traditional lifestyles as well as incorporating target research and promoting awareness activities when relevant to project objectives and consistent national priorities. The project, also, falls within objective (a) of the Operational Programme Number 1 which stresses the conservation and protection of ecosystems threatened by increased pressure from intensified use, drought, and desertification which lead to land degradation.

Thus, the project aims at the preservation of biodiversity in the Dinder National Park by encouraging species conservation and the sustainable use of resources through the integration of local communities in the utilization and management of the natural resources of the park. In addition the project aims at maintaining the park as a coherent eco-system which will act as a perpetual reservoir of gene pool and species diversity in an area where nature conservation is threatened by large scale development schemes, various sources of resource misuse, drought and land degradation.

BACKGROUND INFORMATION AND CURRENT SITUATION

The Dinder National Park lies along the border with Ethiopia constituting transition ecotone zone between two floristic regions: the Ethiopian high plateau and the arid Saharo-Sudanian biomes. The highlands receive an average of 800 mm of rain while in the western arid biome precipitation averages about 100 mm. The gradation of vegetation changes from Acacia-Balanites stands to desert scrub. The park also lies along the boundary of two major faunal realms of the world i.e. the Palearctic and the Ethiopian region with an intermixing of the two faunal zones takes place, adding to the diversity of the floral and faunal communities. It spreads in three states in central east Sudan namely Sennar, Gadarif, and the Blue Nile.. Its boundaries follow the Rahad river at latitude 12° 26'N and longitude 35° 02'E continuing in a northwestern direction up to latitude 12° 42'N and 34° 48'E at River Dinder. It further continues up to latitude 12° 32'N and longitude 34° 32'E along Khor Kenana. It then diverts slightly to the southeast, to latitude 11° 55'N and longitude 34° 44'E, to be enclosed by the Sudan-Ethiopian border. The park encompasses an area of 8960 square kilometers.

Because of expanding agricultural schemes, the Dinder National Park forms the only track of surviving woodland and flood plain in the vast Savannah grassland zone of the Sudan. It provides refuge for the once abundant wildlife species and acts as a reservoir of gene pool for a number of rare species whose number is declining in the horn of Africa due to large scale habitat degradation. It is also situated along the major north-south flyway of migratory birds. The Park comes under the influence of summer rains, which turn it into a quagmire during the wet season. The swelling of the rivers helps in revitalizing the wetlands and the new pools and ponds on which the human and wildlife population are dependent. The high rainfall also results in the growth of creepers

such as Capparis tomentosa, climbers, epiphytes, lichens and mosses, which form an important ecological niche.

In general, the Park has three major ecosystems, each with its own plant and animal communities and furthermore contributing to the overall diversity of the area. Largest in extent are the Acacia seyal, Balanites aegyptiaca and Combretum sp. woodlots characterized by heavy cracking clays and tall coarse sorghum grasses. Along the banks of the rivers and the larger seasonal streams a riverine ecosystem with multi-layered forest exists. The upper story consists of doom palm, and Acacia siberiana, while the lower story is dominated by Ziziphus abyssininea, Ziziphus spina-christi and Mimosa pigra. Dominant grasses are Sorghum sp. and Brachiaria sp. This riverine ecotone harbours specialized species of insects such as the common termite useful in range management, the harvester termite which recycles deadwood and prevents biohazards, the small mound builder Trinervitermes geminatus, and the great mound builder Macro termintes. A number of these species are endemic to the area and not found elsewhere in the Sudano-Saharan region. The wetlands form one of the important ecosystems; being a source of the most nutritious grasses to the herbivores. Of particular importance is Echinochloa sp. which provides nutritious food during the most severe part of the dry season. Wetlands, also, attracts migratory birds and forms the most suitable habitat for their feeding and breeding. The wetlands, are formed by meanders and oxbows along the rivers. They are gradually filled in by sediments derived from their own catchments.

In the past the park was home to a far greater number of biologically diverse species, several of which have since disappeared and/or become extinct. Among these lost species are the black rhinoceros (Diceros bicornis), the wild dog (Lycaon pictus), the hippopotamus (Hippopotamus amphibius), the Nile crocodile (Crocodylus Niloticus) and the Sommerings gazelle (Gazella sommeringi). However, a number of species included by the World Conservation Monitoring Centre in the "IUCN Red List of Threatened Animals" are still found in the national park. These include the reed buck (Redunca), the tiang (Damaliscus korrigum) and the red-fronted gazelle (Gazella rufifrons), all of which have been classified as endangered species. In addition, the park contains several species listed by the IUCN as being vulnerable or threatened such as the African elephant (Loxodonta african), the lion (Panthera leo), the leopard (Panthera pardus) and the cheetah (Acinonyx jubatus). Likewise, the park preserves several species like the roan antelope (Hippotragus equinus), the greater kudu (Tragelaphus strepsicerus), the black-backed jackal (Canis mesomelas) and the Nubian giraffe (Giraffa Camelopardalis) which are disappearing locally even though they are not endangered worldwide.

Continuous droughts in the Sudano-Sahelian region coupled with the ongoing civil war has resulted in the settlement of a large number of people along the boundaries of the park in the last three decades. According to the 1993 Population Census, over 55,000 people live in 36 villages out side the park. The majority of those people own livestock and engage in subsistence agriculture. Inside the park, there are some 6,000 people who have small plots along the banks of the Rahad river in which they grow sorghum, fruits, vegetables and grains. The presence of large number of livestock has strained the pressure on the area and overgrazing outside the park is prevalent. Trespassing of livestock into the park takes place at a regular basis despite the heavy

finer imposed by the park authorities on the owners. Fires are considered one of the major environmental problems in the area. Fires are normally set by honey collectors as well as cattle herders who burn tall grasses in order to make green grass available for their animals. At the onset, this process results in the elimination of fire susceptible trees and shrubs and cause the loss of nutritious perennial grasses.

Increasing pressure to convert woodlots to large scale agricultural fields and the building of canals has resulted in the creation of monocultures of sorghum outside the park's boundaries. The change is so abrupt that the lands adjacent to the park are almost totally devoid of wildlife and increaser species such as *Caloptropis procera* have taken over the natural vegetation. This is an indicator species which shows heavy pressure of overgrazing and loss of fertile soils. Large tracts of marginal land around the Park have been converted into agricultural fields. These marginal areas are prone to declining yields after a few years of cultivation because of their fragile soils and thin nutrient base. After a few years, the fields are abandoned and the farmers move to a new area. Such large scale agricultural practices have resulted in the abolishment of the traditional rotational grazing, woodlots keeping and farming pattern which assured sustained production and development.

The protection of the park is of global importance as it provides a refuge for a large number of animals, migratory birds and protects endemic species which live in the region or are permanent settlers of the park. The Government of Sudan is aware of the value of biological resources as an integral part of the national heritage and as a potential for yielding sustainable benefits. It has recognized the necessity to protect the country's national resources and biodiversity, and is concerned with the need to protect this specific park which represents one of its outstanding natural heritage sites and serves as one of the few northernmost national terrestrial parks in Africa. Without GEF assistance the management and protection of the park's resources are unlikely to improve.

EXPECTED PROJECT OUTCOMES

1. Outcomes

The project is designed to remove the identified root causes threatening habitat and biodiversity conservation and to ensure the sustainable use of natural resources in the park. The benefits of the project will be multi-fold in that it will establish new partnership and enhance cooperation between the impoverished communities and the park's administration by allowing a better management and utilization of the park resources. Biodiversity of the area will be protected through the application of properly planned management systems. The fauna and flora of the park will receive protection and certain species, such as the Nile Crocodile, which has been exterminated could be reintroduced at a low cost. Experience gained could be built on to plan reintroduction of other species which have disappeared in recent years.

The project activities, to be carried over three years, are expected to have the following outcomes:

buffer zone and relieve the pressure on the park. These Land Use Plans will be developed and implemented by the Local Governments with the financial and technical assistance by the project.

An intensive awareness programme and an environmental campaign will mobilize the community to participate in the rehabilitation of the buffer zone through community woodlots and proper range management techniques.

- Launching of an intensive environmental awareness programme and further mobilization of the communities to participate in the rehabilitation, conservation and management of the buffer zone.
- In collaboration with Local Government, nomadic trespassing inside the park will be reduced/controlled through good patrolling and identification and incorporation of the nomads into the Land Use Plan of the buffer zone.
- Improvement and development of the park's infrastructure to ensure suitable working and living conditions of game wardens. This also includes the improvement of roads and transport to ensure better patrolling capacity as well as the improvement of park facilities for future scientific research and educational purposes.
- Establishment of a well designed monitoring system with specific set of indicators which will help in monitoring the development of biodiversity and the effect of park management on wild life species and habitat.

2. Root Causes Analysis and Project Activities:

The table on page 8 illustrates the analysis of root causes, different activities to remove root causes, and expected out puts of the project.

Problem	Root cause	Activity	Output
1. Minimal biodiversity management capacity.	<ul style="list-style-type: none"> Lack of training and awareness of biodiversity management in Government related departments. 	<p>Base line biodiversity surveys.</p> <ul style="list-style-type: none"> Identification of management priorities. Needs assessment for training of park wardens. Needs assessment for animation/awareness programmes. Land use mapping and recommendation Socio economic survey. <ul style="list-style-type: none"> Preparation of policy recommendations for the park and buffer zone based on data collected. Preparation of strategic framework for the park and the buffer zone. <ul style="list-style-type: none"> Training course for Chief Warden in: <ol style="list-style-type: none"> <i>Park management and planning</i> <i>Biological and ecological processes taking place in the park</i> <i>Importance of biodiversity</i> <i>Monitoring and evaluation</i> Training courses for game wardens in: <ol style="list-style-type: none"> <i>Day-to-day park management.</i> <i>Patrolling duties.</i> <i>Biological and ecological processes taking place in the park.</i> <i>Importance of biodiversity management.</i> 	<ul style="list-style-type: none"> Park management plan prepared. <ul style="list-style-type: none"> Land use policy recommendations prepared and adopted. Strategic framework for the park prepared. Chief Warden/Park Manager trained. <ul style="list-style-type: none"> Wardens trained and capacity to manage and patrol the park improved.

Problem	Root cause	Activity	Output
2. Detrimental use practices by communities inside the park.	<ul style="list-style-type: none"> Lack of training and awareness of biodiversity management in Government departments and among local communities. No benefit sharing of biodiversity with local communities. 	<ul style="list-style-type: none"> Design and implementation of a zoned multi-use system. Implementation of the Management Plan in close cooperation with local communities. Intensive awareness raising programme. Creation of community-based structure for sustainable biodiversity conservation. These structures will built on traditional and existing local experiences and practices. Dialogue with community leaders to ensure integration, on sustainable basis, of community inside the park through activities such as: <ol style="list-style-type: none"> Collection of dead wood and palm leaves, wild fruits and wild okra Growing of okra in small plots Controlled trapping of Guinea fowl Apiculture Fishing Establishment of Community woodlots Cut and carry fodder Survey wetlands and canals feeding them. Build seasonal sand dams at the beginning of the rainy season to capture rainwater for wetlands. Regular monitoring of wetlands. 	<ul style="list-style-type: none"> Sustainable Management Plan implemented. Institutional frame work at the grass root level established. Sustainable income generating activities established and local people integrated into the park management. Wetlands rehabilitated, conserved and properly managed.

Problem	Root cause	Activity	Output
3. Severe Unmanaged pressures on the buffer zone.	<ul style="list-style-type: none"> Nomadic trespassing inside the park causing fires and competition for range with wildlife. Honey collectors causing fires. Large number of cattle, sheep and goat herders settled in the buffer zone of park during the last three decades, causing overgrazing and land degradation. Conversion of natural woodlots into mechanized farming creating monoculture cropping and contributing to land degradation. 	<ul style="list-style-type: none"> Control of trespassing of nomads by collaborators, community organizations, wardens and Local Governments. Identifying alternative nomadic corridors and grazing through Land Use Plan. Establishment of fire lines. Improved apiculture techniques introduced. Intensive patrolling by wardens and Local Government. Land use recommendations and guidelines for land use planning in the buffer zone Establishment of a Task Force to develop the Plan for each state by the Government with technical and financial support by the project. Follow up on the implementation of the Land Use Plan by community leaders, local authorities and project management. Awareness raising programme. Environmental campaign. Establishment of institutional framework and identification of local leaders, to form working groups to liaise with government and mobilize people. Establishment of community woodlots to be managed for fuel wood and gum arabic. 	<ul style="list-style-type: none"> Trespassing of nomads into the park controlled/reduced. Proper fire lines established and fires controlled. In collaboration with Local Government, proper Land Use Plans developed for the three states involved (Blue Nile, Sennar and Gedarif) where the park and the buffer zone extend. Community mobilized to rehabilitate the degraded land.

Problem	Root cause	Activity	Output
4. Park limited infrastructure.	<ul style="list-style-type: none"> Lack of park's infrastructure. 	<ul style="list-style-type: none"> Rehabilitation of warden camps. Rehabilitation of visitor camp. Upgrading of the offices at project's HQs. Improvement of roads. Reintroduction of camels as a means of transportation for wardens. Promotion of good relations with the related Local Governments. Shallow wells constructed at suitable sites to provide drinking water for communities and wardens in the park. Establishment of small herbarium and small library. 	<ul style="list-style-type: none"> Patrolling of the park improved and infrastructure developed/rehabilitated. Drinking water provided to wardens and local community. Development of facilities to promote the use of the park for future scientific research, domestic tourism and educational purposes.
5. Effective conventional and non-conventional monitoring systems lacking.	Absence of data regarding different habitat and absence of monitoring system to record the impact of different practices and climatic changes on wildlife.	Establishment of participatory monitoring and tracking systems.	<ul style="list-style-type: none"> Iterative process of lessons learnt through scientific monitoring.

support for alternative livelihood options) at a total cost US\$ 602,000 (US\$ 427,000 from GEF and US\$ 173,000 from UNDP);

3. Management of the buffer zone to relieve the pressure on the park (including development and implementation of Land Use Plan for the buffer zone, participatory rehabilitation of the degraded lands through community woodlots) at a total cost US\$ 577,000 (US\$ 450,000 from FAO "TCP" and US\$ 127,000 from UNDP);

4. Infrastructure development for biodiversity conservation at a total cost 409,000 (US\$ 221,000 from GEF and US\$ 188,000 from UNDP) and

5. Development of monitoring system to monitor biodiversity development (including the effect of park management over wildlife population dynamics and habitat improvement) at a total cost US\$ 50,000 from GEF.

SUSTAINABILITY ANALYSIS AND RISK ASSESSMENT

The large training, sensitization and awareness components of this project, intended for both institutional strengthening of the Wildlife Conservation General Administration (WCGA) and the communities involved, in addition to direct involvement of the communities in the planning, implementation, and effective management of the various activities will ensure the sustainability of the project. On the basis of research and data-gathering undertaken by the project, in the first year, Land Use Plans will be developed and implemented to generate long-term solutions to the problems faced by Dinder National Park and its environs as a consequence of large-scale land degradation and natural resource misuse. Efforts will be made to achieve the widest dissemination of findings and thus to promote the generalization of the processes of integrated development and biodiversity conservation.

This model of park management will be most appropriate for replication in other countries where the integration of local communities into park management is a viable option. With its focus on finding immediate solutions to the problems faced by the Park, while also addressing long-term problems related to sustainable development and natural resource misuse, the present project will be a pilot effort for linking Environment and Sustainable Development processes in the semi-arid

and arid regions south of the Sahara. Furthermore the demonstration and/or value of this project provides a high potential for replication, both nationally and within the region.

One of the risks facing the project is that a number of nomadic cattlemen from west Africa live near the vicinity of the Park during the dry season.. These nomads are on the move and not bound by international borders. With the opening of roads, integration of resources use, and regular patrolling, it is most likely that the frequency of trespassing into the park will be decreased. The cooperation of the Dinder provincial government is required as the rangers alone may not be able to handle the number of cattle that are brought into the Park for grazing. On the other hand, the rehabilitation of the wetlands, and other components related to the improvement of the habitat will depend on weather conditions and natural factors, which take a long time before any tangible improvement is shown. Henceforth, the time factor of three years is too short to show sufficient results relating to habitat improvement, increase in the number of wildlife and reaping of research outcome. This should be taken into account in the final evaluation of the project.

STAKEHOLDERS INVOLVEMENT AND SOCIAL ASSESSMENT

The project will be supported by the Ministry of Interior, Ministry of Environment and Tourism, Ministry of Finance and National Economy, Ministry of Agriculture, and the Sudanese Environmental Conservation Society (NGO). With the commitment to involve local communities in the park's management, the project will have the strong support from the local communities. IUCN will support the project through technical backstopping missions. UNDP Field Office will undertake regular monitoring and reviews and provide technical assistance for the project.

Socio-economic impact of the project on local communities will be assessed on the basis of the information and data gathered in the first year of the project assessment. The project will also focus on the collection of scientific data on the different ecosystems and habitats and the perpetuated impact of the park management on the wildlife.

INCREMENTAL COST ASSESSMENT

This project builds on the work, which the government of the Sudan is already supporting in the Dinder area, plus the joint UNDP/FAO initiative for the buffer zone around the park. Combined, these initiatives form the baseline. However, as it is evident from study of the park, the biodiversity of the park is being eroded, in view of a number of root-causes, which have been outlined elsewhere in the present document. A GEF initiative has thus been identified, which will greatly strengthen the ability of the Sudanese conservation staff and the local communities to manage the biodiversity resources in the park.

As has been outlined elsewhere in the document, baseline resources have been committed by the Government of the Sudan, UNDP and FAO for the rehabilitation of natural and biodiversity resources at the Dinder National Park and the buffer zone.. Baseline resources will be used for land use

management plans and rehabilitation activities for the promotion of biodiversity conservation and good management at the park. GEF resources will complement baseline activities to remove outstanding barriers for habitat restoration and species survival. GEF resources will be specifically used for elaborating an integrated Management Plan for Dinder and the Buffer Zone through integration of local communities in the use and management of natural resources.

(see the table on following page)

Global Environmental Benefit	Baseline B	Alternative A	Increment A-B
1. Development of sustainable Park Management.	<ul style="list-style-type: none"> Minimal training for park wardens (US\$ 2,000). Elementary Management Plan established (US\$ 2,000). Mapping prepared for park buffer management (US\$ 4,000). Socio economic survey of buffer zone finalized (US\$ 4,000). <p>US\$ 12,000</p>	<ul style="list-style-type: none"> Park management staff and wardens trained for biodiversity conservation and management (US\$ 7,000). Participatory, integrated biodiversity Management plan developed (US\$ 42,000). Policy recommendations for buffer zone management for sustainable resource use finalized (US\$ 13,000). <p>US\$ 62,000</p>	<ul style="list-style-type: none"> Biodiversity management training park wardens (US\$ 5,000). Species and habitat surveys conducted to enable holistic and integrated park management (US\$ 30,000). Park Management Plan Developed (US\$ 10,000) Integrated park/buffer policy recommendations defined (US\$ 5,000). <p>US\$ 50,000</p>

Global Environmental Benefit	Baseline B	Alternative A	Increment A-B
<p>2. Implementation of Participatory Integrated Management Plan within the park boundaries.</p>	<ul style="list-style-type: none"> • Definition, with community of sustainable use activities such as: <ul style="list-style-type: none"> – Collection of dead wood and palm leaves, wild fruits and wild okra. – Growing of okra in small plots. – Controlled trapping of Guinea fowl. – Apiculture. – Fishing. – Establishment of community woodlots. • Cut and carry fodder (US\$ 53,000). • Wetland management through canal rehabilitation and building of seasonal sand dams for maximum water storage (US\$ 110,000). • Controlling of trespassing and incidental fires by nomadic groups and honey collectors through provision of alternative migratory paths and corridors and improved honey collection techniques (US\$ 10,000). <p>US\$ 173,000</p>	<ul style="list-style-type: none"> • Implementation of sustainable biodiversity conservation Management Plan based on: Well defined participation structure, agreed sustainable use activities, and alternative livelihood systems (US\$ 382,000). • sustainable management of the wetlands. • Biodiversity protected through limitation of trespassing and incidental fires (US\$ 210,000). • Controlling of trespassing and incidental fires by nomadic groups and honey collectors through provision of alternative migratory paths and corridors and improved honey collection techniques (US\$ 10,000). <p>US\$ 602,000</p>	<ul style="list-style-type: none"> • Participatory definition and implementation of a multi-use zones within the park based on intensive awareness programme (US\$ 279,000). • Creation of community-based structures for sustainable biodiversity management (US\$ 50,000). • Survey of the wetlands; its biodiversity, management and monitoring for maximum biodiversity conservation (US\$ 100,000). <p>US\$ 0</p> <p>US\$ 429,000</p>

Global Environmental Benefit	Baseline B	Alternative A	Increment A-B
3. Development and implementation of Land use Plan for sustainable management plan for the buffer zone and to relieve the pressure on the park.	<ul style="list-style-type: none"> Land use Plans for the three involved states developed and activities for sustainable management of the buffer zone implemented (US\$ 577,000). <p>US\$ 577,000</p>	<ul style="list-style-type: none"> Land Use Plans for the three involved states developed and activities for sustainable management of the buffer zone implemented (US\$ 577,000). <p>US\$ 577,000</p>	US\$ 0
4. Infrastructure enhancement.	<ul style="list-style-type: none"> Rehabilitation of park offices; provision of drinking water for community and park wardens (US\$ 188,000). <p>US\$ 188,000</p>	<ul style="list-style-type: none"> Enhanced infrastructure for biodiversity management, community well-being and visitors (US\$ 409,000). <p>US\$ 409,000</p>	<ul style="list-style-type: none"> Improved biodiversity management through infra structural improvements facilitating access and transport (US\$ 171,000). Establishment of simple herbarium for biodiversity for education purposes and small library for park management team and visitors (US\$ 50,000). <p>US\$ 221,000</p>
5. Biodiversity monitoring system put in place.	US\$ 0	<ul style="list-style-type: none"> Iterative process of lessons learnt through scientific monitoring established (US\$ 50,000). <p>US\$ 50,000</p>	<ul style="list-style-type: none"> Establishment of monitoring system with specific set of indicators for monitoring biodiversity development and the effect of park management on wildlife species (US\$ 50,000). <p>US\$ 50,000</p>
Total	US\$ 950,000	US\$ 1,700,000	US\$ 750,000

BUDGET

PROJECT BUDGET

PDF:			
Personnel:	130,000	238,000 + 150,000 ²	368,000
Subcontracts:	250,000		250,000
Training:	70,000	140,000	210,000
Equipment:	156,100	387,000	543,100
Travel:		20,000	20,000
Evaluation mission(s):	20,000	20,000	40,000
Miscellaneous:	30,000	95,000	125,000
FAO support cost	72,900	50,000	122,900
Project support:	21,000		21,000
Project total (PDF + Project costs):	750,000	950,000	1,700,000

Note: This budget excludes the Sudanese in-kind contribution

PROJECT IMPLEMENTATION PLAN

The project will be executed by the Food and Agriculture Organization of the United Nations (FAO) and will be implemented by the Higher Council for Environment and Natural Resources (HCENR). FAO has a history of involvement and support in the Blue Nile region, in which the Dinder national park is located. FAO has been actively involved in supporting many national parks in Africa south of the Sahara through the 1960s -1990s. FAO has especially been active in countries where international NGOs such as IUCN, WWF etc. have chosen not to operate. It is therefore of interest, that the first basic management plan for Dinder which the Government of Sudan prepared in the 1970s, and which was subsequently updated, was prepared with assistance from FAO.

To display its entrusted implementation role, the HCENR will be assisted by a number of Government cooperating entities, namely the Wildlife Conservation General Administration (WCGA), the Forests National Corporation, the Sudan Environment Conservation Society (NGO), the Wildlife Research Center, the State Ministries of Agriculture in the Region and the Institute for Environmental Studies (IES). These Government bodies will act according to their respective areas of expertise .

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1. UNDP (US \$ 500,000)
FAO, TCP (US \$ 450,000)

- 2 Government input (in kind)

Being an executing agent, the FAO will ensure good quality programme implementation through adequate and timely provision of basic inputs, capacity building, exchange of expertise and technical backstopping. In addition, through the launching of a TCP contribution to undertake all ground work related to the management of the buffer zone. This will include data collection, analysis, development and implementation of the buffer zone management strategy with particular reference to sustained conservative use of the buffer resources. A detailed TCP outline will be designed by FAO as part of the formulation of the integrated GEF intervention. Moreover the IUCN will be involved in a cooperative manner, through sub-contractual arrangement, to provide technical consultations including technical backstopping as appropriate.

A multi-disciplinary advisory committee composed of members of the Wildlife Conservation General Administration, the Wildlife Research Center, Forestry National Corporation, Range and Pasture Administration, Sudanese Environment Conservation Society (NGO), State Ministries of Agriculture in the region, the Institute for Environmental Studies, Department of Anthropology, University of Khartoum, Higher Council for Environment and Natural Resources, UNDP desk office in the Ministry of Finance and National Economy, FAO and the UNDP Office in Khartoum, will monitor the progress of the project and provide guidance to the Project Manager and the implementing agency, the HCENR, on a regular basis.

The project will work in close cooperation with the local communities through their respective village Development Committees. Particular attention will be given to the integration of the local communities in the Park and its resources to create an atmosphere of cooperation and enhance the role of women in using these resources. Organized groups will participate in the collection of deadwood in the Park, learn apiculture techniques to raise wild bees, collect wild fruits, grow wild okra in small experimental plots, trap guinea fowl, collect gum arabic, participate in the collection of palm leaves and learn improved basket weaving and other skills.

ACTIVITIES	PROJECT-MONTHS
Completion of project activities	3 6 9 12 15 18 21 24 27 30 33 36
Mounting of the initial planning phase	-----
Planning, data collection and preparation of the Management Plan	-----
Training courses for Chief Wardens and park warden	-----
Design and implementation of a zoned multi-use system	-----
Intensive raising awareness programme	-----
public awareness campaigns in buffer zone.	-----
Creation of community-based structure for sustainable biodiversity conservation.	-----
Income generating activities	-----
Rehabilitation of the wetlands	-----
Control of trespassing of nomads and incidental fires	-----
Establishment of fire lines	-----

Preparation and implementation of a Land Use Plan for the three involved states	-----
Management of the buffer zone	-----
Infrastructure development	-----
Monitoring of biodiversity conservation	-----

PUBLIC INVOLVEMENT PLAN

Stakeholder Identification

Key stakeholders include the local communities, Ministry of Environment and Tourism (Higher Council for Environment and Natural Resources), Ministry of Interior (Wildlife Conservation General Administration (WCGA)), Ministry of Finance and National Economy, related State's Government, Forests National Corporation, Sudanese Environment Conservation Society (NGO), Wildlife Research Center, Range and Pasture Administration, Institute for Environmental Studies (IES), and IUCN's Protected Areas Programme.

Information dissemination and consultation

Continuous meetings will be held with all key stakeholders to explain the project, identify responsibilities, modes of cooperation, and benefits to related parties, including both Government institutions and ministries, local Governments, local beneficiary groups, tribal leaders and Sheikhs. Continuous consultations will also be conducted with representatives of the local communities, Local Government authorities and other related Government entities. Progress reports will be disseminated to all concerned and interested parties.

The monitoring component of the project, indicating the results achieved, will enhance its potential for replication nationally and elsewhere in the region where similar ecological and social conditions exist. The findings of the research and data-gathering activities of the project will be widely disseminated at all appropriate levels including the Government in particular.

Social and participation issues

The integration of the local communities in the sustainable use of resources constitutes the main strategy of the project. The people will be educated on the sustainable use of natural resources through community participation by allowing them to reap financial benefits from the renewable resources of the Park. Such an undertaking will lead to an understanding of the value of the resources, their proper management within an atmosphere of coexistence.

Socio-economic assessment will be conducted in the initial stages of the project and will focus on the socio-economic conditions of the population inside and outside the park, the ways and means to enhance cooperation between the impoverished communities and the park administration. The assessment will, also, focus on the ecological and biological issues and apply results which will enhance the participation of local communities and the overall management of the park.

MONITORING AND EVALUATION

Monitoring of the project will be conducted jointly by the Wildlife Conservation General administration, the Higher Council for Environment and natural resources (HCENR), Ministry of Finance and National Economy, local Government Officials and UNDP. The project will identify and select specific indicators for biodiversity and development in order to evaluate and determine the success of the project. Indicators for biodiversity may include: species diversity/species richness; density of trees and shrubs in woodlots, riverine habitats and wetlands; vegetative biomass per unit area; floral density of understory; soil cover and erosion; extent of burned areas of park. Development indicators may consist of the following: ability of local leadership to exert social discipline and control livestock trespassing and handling of issues; ability of communities to participate in undertaking planned projects; decrease in tensions between local community and game wardens; level of cooperation between the local communities and game wardens; reduction in the level of malnutrition among children; increase in purchasing power among members of local communities.

These indicators, along with additional research to be undertaken on ecological and socio-economic conditions within and beyond the perimeter of the park will provide an important resource for formulating and evaluating future conservation and sustainable development efforts.

TECHNICAL REVIEW

Not required.

PROJECT CHECKLIST

BIODIVERSITY	CLIMATE CHANGE	INTERNATIONAL WATERS	OZONE DEPLETION
Prot. Are a zoning/mgmt: X	Efficient production and distribution:	Water body:	Monitoring:
Buffer zone development: X	Efficient consumption:	Integrated land and water:	Country program:
Inventory monitoring:	Solar:	Contaminant:	ODS phaseout:
Ecotourism:	Biomass:	Other:	Production:
Agro-biodiversity:	Wind:		Other:
Trust fund(s):	Hydro:		
Benefit-sharing:	Geothermal:		
Other:	Fuel cells:		
	Other:		
INSTITUTION BUILDING: X			
INVESTMENTS:			
POLICY ADVICE: X			
TECHNICAL/MANAGEMENT ADVICE: X			
AWARENESS/INFORMATION/TRAINING: X			
OTHER:			

Project Planning Matrix (Logical Framework Matrix).

Intervention Strategy	Objectively Verifiable Indicators	Means of Verification	Assumption and Risks
Development Objective Conservation of globally significant biodiversity resources and removal of root barriers at the Dinder National Park.	Species diversity and species richness maintained and/or improved.	Surveys on species diversity; reports on habitat restoration, and ongoing monitoring, evaluation and enforcement tools.	<ul style="list-style-type: none"> Detrimental practices of local communities; Demand for management of governmental bodies and among local communities.
Immediate Objective 1 1. Preservation of biodiversity in the Dinder National Park by encouraging species conservation and sustainable use through integration of local communities in the use and management of natural resources; 2. Maintenance of the park as a coherent eco-system which will act as a perpetual reservoir of gene pool and species diversity.	Restored significant biodiversity species (trees and shrubs); promoted wetland habitats; Participation in park management and commitment of local communities towards nature conservation; Increased commitment of Government towards sustainable management of natural resources.	Site observation; reports; intensive awareness programs and campaigns to enhance local community commitment; and consultation with relevant government bodies.	<ul style="list-style-type: none"> NGOs participation is vital; Committed governmental bodies for biodiversity development.
Outputs: 1. Institutional framework is established in a participatory manner and from grass root levels; 2. A well articulated Management Plan and strategic framework is developed; 3. Management Plan is implemented with local communities for the conservation and sustainable use of the park's natural resources; 4. Nomadic trespassing and detrimental use practices are controlled and incidental fires reduced; 5. Wardens and Park Managers are trained and training capacities improved; 6. Land use management plan is developed at park's buffer zone for the three involved states; 7. An awareness campaign is developed to enhance participation in the conservation, and management of the park and the buffer zone; 8. Incentives and sustainable income generating activities are established; 9. Park's infrastructure developed and drinking water provided to wardens and local community; 10. Monitoring of the biodiversity conservation.	<ol style="list-style-type: none"> Density of trees and shrubs, condition of wetlands habitat, floral density, extent of burned areas of the park, reintroduced species. Ability of local community to undertake planned activities and ability to reap financial benefits from the park on sustainable basis; Cooperation between local communities and game wardens; Increased commitment of the local and federal Government to initiate and implement sustainable Land Use Plans; Community outreach and informal public awareness gatherings; Adoption of monitoring outcomes to improve park management. 	<ul style="list-style-type: none"> Stocktaking data, maps, interim reports and documents on plan development; Committed personnel and local groups for management of park and buffer zone, ongoing fire control, incentives and alternative livelihood options; Frequent patrolling on trespassing, and incorporation of nomads into the land use plan for buffer zone; Awareness leaflets, brochures and public hearing through media (TV, Radio, Newspapers, etc.); About 437 km length of roads are improved for better patrolling; 15 weir wetlands, 8 shallow wells in side park and 6 wells outside park are rehabilitated; Upgrading of offices at HQ; site renewed for plant scientific research (Herbarium) and educational purposes (Library); Monitoring tools for performance of park management; and ongoing internal evaluation. 	<ul style="list-style-type: none"> Elaboration of management plan on time; Commitment for long term implementation of management plan and integration of plan into other development sectors in the area and the buffer zone.

Activities	INPUTS		PRECONDITIONS
<ul style="list-style-type: none"> • Base line biodiversity surveys, identification of management priorities, needs assessment for training of park wardens, needs assessment for animation and awareness programs, land use mapping, and socio-economic survey; • Preparation of policy recommendations for the park and buffer zone; • Preparation of strategic framework for the park and buffer zone; • Training for Chief Warden in park management and planning, biological and ecological processes taking place in the park, importance of biodiversity, and monitoring and evaluation; • Training for game wardens in day-to-day park management, patrolling duties, biological and ecological processes taking place in the park, and importance of biodiversity management; • Design and implementation of a zoned multi-use system; • Implementation of Management Plan in close cooperation with local community; • Creation of community-based structure for sustainable biodiversity conservation; • Dialogue with community leaders to ensure integration, on sustainable basis, of community inside the park through activities such as: collection of dead wood and palm leaves, wild fruits and wild okra; growing of okra in small plots; controlled trapping of guinea fowl; apiculture; fishing; establishment of community woodlots; cut and carry fodder ; • Survey wetlands and canals feeding them; opening of channels during dry system; build seasonal sand dams at the beginning of the rainy season to capture rainwater for wetlands; and regular monitoring of wetlands; • Control of trespassing of nomads by collaborators, community organizations, wardens and local Government; identifying alternative nomadic corridors and grazing through Land Use Plan; and intensive patrolling by wardens and local Government; • Establishment of fire lines; • Improved apiculture techniques introduced; • Land use recommendations and guidelines for land use planning in the buffer zone; • Establishment of Task Force to develop the plan for each state by the Government with technical and financial support by the project; • Establishment of community woodlots; • Establishment of small herbarium and library; and • Establishment of participatory monitoring and tracking systems. 	<ul style="list-style-type: none"> • Financial resources for baseline activities of land use plans, initial surveying and training, wetland management, rehabilitation of park, and controlling of trespassing; • National and international expertise to train trainers and wardens. • Financial resources to cover incremental costs: management training, biodiversity surveys, zoning, awareness, infrastructure improvement and monitoring systems; • In kind contribution from the Government in staff for the project and for the management of the site. 		<p>None.</p> <p>23</p>