

UNDP
Global Environment Facility
EXPEDITED PROJECT DOCUMENT

Project Number: 31

Project Title: Reversal of Land and Water Degradation Trends/Lake Chad Basin Ecosystem

Countries: Cameroon, Central African Republic, Chad, Niger, Nigeria, Sudan

Duration: 48 months
July 1, 2002 (Estimate) – June 30, 2006

ACC/UNDP Sector: 0410 - Water Resources
Planning & Management

Executing Agency: UNOPS

UNDP-GEF: US\$ 7.036M.
WB-GEF: US\$ 3.044M.
GEF Total: US\$ 10,080,000
Co Finance:
UNDP: US\$ 350,000 (in-kind)
BMZ: US\$ 617,600
DGIS: US\$ 1,930,000
DFID: US\$ 2,078,900
WWF: US\$ 155,000
Countries: US\$ 1,750,000
(In Kind)
LCBC: US\$ 411,800
Co-finance Total: US\$ 7,293,300
Project Total: US\$ 17,373,300

Summary

The long-term objective of the GEF project is to achieve global environmental benefits through concerted management of the naturally integrated land and water resources of the Lake Chad Basin. The specific purpose of the project is to overcome barriers to the concerted management of the basin through well-orchestrated and enhanced collaboration and capacity building among riparians and stakeholders. Transboundary issues have already been identified and agreed by five member States of the Lake Chad Basin Commission (LCBC) in the regional LCB Strategic Plan. Stage I of GEF support will therefore involve completion of a Transboundary Diagnostic Analysis (TDA) and lead to the formulation of a GEF supported Strategic Action Programme (SAP). The SAP will include necessary baseline and additional actions to address the priority transboundary issues and provide an essential monitoring and evaluation tool for implementation. Stage I will require the development and testing of set of institutional mechanisms and implementation methodologies, including pilot demonstrations, that explicitly link regional, national and local initiatives in land and water management. Additionally, it will involve preparation of a basin-wide synthetic framework in which transboundary priorities can be addressed and project interventions monitored. Stage II of GEF will support full-scale implementation of the GEF SAP. The project provides for a process of formal endorsement of the GEF SAP by the participating governments, support to the translation of SAP provisions into national policy and legislation, and the mobilisation of institutional and investment resources for its implementation. Council comments received at the time of Project Brief submission are addressed in Attachment 9 of this Project Document.

On behalf of the	Signatures	Date	Name/Title
Government of Cameroon			
Government of CAR			
Government of Chad			
Government of Niger			
Government of Nigeria			
Government of Sudan			
Lake Chad Basin Commission			
UNOPS (Executing Agency)			
UNDP			

3. COSTS AND FINANCING (MILLIONS US \$):

GEF FINANCING

Project **\$ 10,080,000**

PDF A,B, and C **\$ 693,500**

Sub-total GEF **\$10,773,500**

Co-financing:

UNDP \$ 350,000

BMZ \$ 617,600

DGIS \$ 1,930,000

DFID \$ 2,078,900

WWF \$ 155,000

LCBC \$ 411,800

Countries \$ 1,750,000

BMZ \$ 617,600

Sub-total, Co-financing: **\$7,293,300**

Total Project Cost: **\$18,066,800**

4. ASSOCIATED FINANCING (MILLION US \$):

\$20,185,600¹

¹ Currently estimated capital and recurrent water sector investment in Lake Chad on the part of the five countries include: Cameroon \$6.6 Million, Chad 69.2 Million, Niger 5.6 Million, Nigeria 458 Million, Central African Republic 17.3 Million.

ACRONYMS

APR	Annual Project Review
BCSP	Basin Committee for Strategic Planning
CPTF	Country Project Task Forces
FAO	Food and Agriculture Organisation of the UN
GEF	Global Environment Facility
IC	Incremental Cost as defined by the GEF
LCBC	Lake Chad Basin Commission
LCB	Lake Chad Basin
NGO	Non-Governmental Organisation
PDF-A	Project Development Facility of the GEF
PDF-B	Project Development Facility of the GEF
PDF-C	Project Development Facility of the GEF
OP	GEF Operational Program
PMU	Program Management Unit
PIR	Project Implementation Review
PSC	Project Steering Committee
PPER	Project Performance and Evaluation Review
PTF	Project Task Force
SAP	GEF Strategic Action Program
STAP	Science and Technical Advisory Panel of the GEF
TDA	Transboundary Diagnostic Analysis
TPR	Tri-Partite Review
UN-DESA	The Department of the United Nations Secretariat for Economic and Social Affairs
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNOPS	United Nations Office of Project Services
UNSO	United Nations Sudano-Sahelian Office
WB	The World Bank

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PROJECT CONTEXT AND BASELINE COURSE OF ACTION

CONTEXT

1. General Context Situated in the eastern part of the Sahel region of Africa, at the southern edge of the Sahara desert, Lake Chad and its active basin constitutes an important freshwater resource shared by Cameroon, the Central African Republic, Chad, Niger and Nigeria. The surface area of the lake varies considerably with the amount of annual rainfall, and the recent historical variation in the surface area of the lake has ranged from approximately 25,000 to 2,000 km². Lake Chad is Africa's fourth largest lake (in terms of surface area) after Victoria, Tanganyika, and Nyassa. Lake Chad is shallow – its average depth being 1.5 m. - and is of relatively small volume. One of Lake Chad's tributaries, the Chari River, supplies approximately 95% of the lake's surface water input. The lake is subject to considerable evaporation and yet is not saline. For thousands of years Lake Chad has been a centre of development, trading and cultural exchange between the people's living to the north of the Sahara and those to the South. Close to twenty million people depend for their livelihood on activities carried out in the lake and its active basin, which includes important wetlands and floodplains covering 966,955 km². By the year 2020, the population that depends on the lake and its associated resources is projected to reach 35 million.

2. Hydrological Context. The geological and geomorphological development of the basin has been conditioned by the slow and 'cool' rifting of the West and Central African Rift System which has formed a regional hydrological sink - the Lake Chad waterbody. The contributing sub-basins are underlain by basement complex in the upper source areas and by a progressively thick sequence of sedimentary deposits toward the Lake. The hydro-stratigraphy in the sedimentary aquifers underlying the Lake are only partially understood and the hydro-dynamic linkages to the Lake Chad waterbody therefore conjectural. However, it is apparent that the close interaction between rainfall, evaporation, the generation of lateral inflow to the lake and the groundwater leakage under the body of the lake influence the overall lake balance. A distinction has to be made between hydrological and hydrogeological context of each influent tributary, and the aggregate water balance of Lake Chad itself. Equally there is a marked distinction between a humid period (prior to 1973) and the current drought regime that has persisted over the last three decades. The significant feature of the hydrological context is the persistent change in the rainfall patterns over the basin as a whole. In the last 30 years isoheytal contours of mean rainfall have shifted to the south by an order of several hundred kilometres. The results of this shift are that areas that had experienced a mean rainfall of 320 mm (for example, over the lake itself) now receive less than 210 mm. In the hydrologically active upstream basins, the decrease in mean rainfall of hundreds of mm/year, has brought about a proportionally larger decrease in basin yield as river runoff and effluent groundwater flow is reduced and flow thresholds reduced. This persistence in the rainfall regime is therefore resulting in a very attenuated basin yield and has to be set against burgeoning human demands upon the land and water resources of the system generally. The LCB comprises three sub-systems:

(a) **The Komadogou-Yobe sub-system** has a basin area of 148,000 km². The upper basins contribute a total long-term natural yield of approximately 7 km³/yr, the bulk of which is impounded at reservoirs within Kano province. More impoundment anticipated in Bauchi province when the Kafin Zaki dam is completed. Consequently the major part of this resource has not been able to establish a natural regime through the downstream Yobe River in Nigeria and Niger for more than 20 years. However, prior to impoundment, a large volumes of flood-water nourished an extensive sub-system of flood-plains and wetlands. This sub-system provides now 1,5km³/yr when exiting the upper basin at Gashua and only 0.45 km³ when arriving at Lake Chad. Below Gashua, flows maintain Hadejia-Nguru wetlands, where effluent flow from the watercourse recharges alluvial aquifers and pumping and diversions for small irrigation schemes are prevalent. In this sub-system drought conditions and development of irrigation by pumping have exacerbated the existing water-stress imposed by upstream impoundment. The current contribution of the Komadogou-Yobe to the Northern part of Lake Chad wetlands is locally significant but minor, in terms of the overall balance

- (b) **The Chari-Logone sub-system**, has a basin area of approximately 590,000 km², and feeds an extensive wetland, the Yareres floodplain (up to 6000 km² of active floodplain in wet year) and goes on to input an average of **37.8 km³/year** to Lake Chad (discharges have been regularly measured at N'Djamena since 1932). However, in the last decades the mean Chari discharge for the 1971-1990 period has fallen to **21.8 km³/year** due to the persistent change in rainfall patterns over the contributing catchment. While the Chari-Logone sub-basin provides more than 95% of the total river inflows to Lake Chad, human consumptive use are currently estimated at less than 3% of the basin yield and are not considered to impact the waterbody itself while the evaporative losses from the Yareres wetlands are significant.
- (c) **The Lake Chad Water-Balance**, has shown marked variation with geologic, historic and living memory and the open water surface of the lake has responded accordingly, exhibiting dramatic expansion and contraction. In the second part of the 15th Century, the open water surface of Lake Chad dried out completely during a generation, but there were very high levels in the 11th, 12th and 17th century. Within the 20th century, it has been possible to observe an irregular succession of wet and dry periods that can be explained by climatic regime and to a certain extent by regional hydrological persistence. In general, after five to ten years a new mean level equilibrium is established for each persistent period of "humid", "normal" or "dry" conditions. In an inter-annual balance established in 1984, the following breakdown of the hydrological balance terms are illustrated under steady state assumptions (no change between initial and final levels). This illustrative water balance applies to "intermediate conditions" or "middle Chad" at a level of 281,5 m (surface maximum of 18 000 km²) and also for a small waterbody at lower levels under much drier conditions. It should be noted that for the past decade, the area of lake and wetlands has further diminished and in dry years has been reduced to an estimate of 4,500 km².

Type of Persistent climatic conditions	Inflows in km ³ /year				Direct rainfall inflows km ³ /year	Outflows km ³ /year			Area of lake and wetlands surface km ²
	Chari sub-system	Komadougou-Yobe	El Beid and others	Total Inflows		Evapotranspiration	Infiltration (est.)	Total outflow	
Long term mean rainfall	37.8	1.0	1.2	40.0	6.0	43.0	3.0	46.0	18,000
Mean of period 1971-90	21.8	0.4	0.2	22.4	2.1	23.1	1.4	24.5	9,400

Tentative illustration of the theoretical water balance of Lake Chad under steady state assumptions for two climatic scenarios. (Sources : adapted from Olivry, Mott Mac Donald and Pdf-B projects)

3. **Environmental Context.** Historically, the most pronounced feature of the Lake Chad Basin has been its wetlands. Lake Chad itself is the second largest wetland in Africa, and hosts biodiversity of global significance. The richness of the Basin's floodplains support a wide range of economic activities – recession agriculture, pastoralism, forest regeneration, fish breeding and production, drought fallback security, and tourism potential. Because no species appear to be restricted to the lake, regeneration of the fishery is possible as long as floodplain habitat remains accessible and fishing is controlled, particularly during dry periods when the stocks are more vulnerable. For this reason the fish stocks have had the capacity to rebound dramatically, even after the complete disappearance of the surface Lake in the 15th century. Recently, Basin fisheries have suffered from a combination of influences and practices that include drought, over-fishing, diversion or blockage of instream flows, increased juvenile catch through use of smaller mesh sizes, and the near complete disappearance of the lake's northern basin. In addition to the fishery, the Basin contains other significant wildlife of regional and global importance. Over 370 species of birds have been inventoried in the basin, a third of the bird species being migratory. Concerns for the health of existing birdlife include a diminishment of nesting areas for the black-crowned crane and wintering grounds for intercontinental migrants

such as the ruff. Other wildlife species in the Basin include the oryx, Damas gazelle, Dorcas gazelle, slender-horned gazelle, elephants, black rhinoceros, the Lake Lere manatee, and other water dependent species such as crocodile, hippo, sitatunga and waterbuck. Concerns about these species revolve around poaching, the drought, and lack of trained cadre to protect, maintain and restore certain species.

4. System boundary. The functional system boundary for water, land forest and wildlife comprise much smaller sub-sets of the Lake Chad Basin's (LCB) geographic limit. The figure of the basin is presented in Annex 6 This is because the hydrologically active area of the basin is much smaller (966 955 km²) and involve five riparian states than the topographic limits of the basin (2,381,635 km²) which cover a large part of desert areas in Niger and Chad and are hydrologically de-coupled from the Lake waterbody. In 1964, four countries created the Lake Chad Basin Commission (LCBC), to handle the problems of development centred on Lake Chad in an area formerly referred to as "*the conventional basin*". This convention did not include the Central African Republic and excluded the large desert expanses of Algeria, northern Niger and Sudan and, in particular, excluded the upstream part of the active basins of the Chari-Logone and Komadugu-Yobe. This "old conventional basin" covered approximately 427 300 km². Since 1994, the Central African Republic has been a member of the LCBC and "*the new conventional basin*" has been enlarged to include the upper basins of the Logone-Chari and Komadugu-Yobe systems. The LCBC's mandate covers the entire active basin (also referred to as the new conventional basin), which now covers 966,955 km², divided up as follows between the 5 countries:

Country	New area of conventional basin (km ²)	Population in 1991 (in thousands)	Density in 1991 (inh/km ²)
Cameroon	56,800	2,100	37
CAR	197,800	700	3.5
Niger	162,375	240	1.5
Nigeria	188,000	13,856	74
Chad	361,980	5,048	14
Total	966,955	21,944	22.7

Distribution of active basin (or "new conventional basin" according to LCBC (areas) and Harrison and Kolawole (population- PDF-B)

This new definition of the active Lake Chad basin thus takes into account almost all the water resources that supplies the lake, the Yaérés floodplain and the aquifers in the lake area.

5. Socio-economic Context. The economic welfare of the region is determined by highly variable and unpredictable rainfall patterns that characterise Sahelian climatology. Furthermore, the soil types that occur across the region exhibit a wide range of water holding and transmitting properties. The production of food, presence of fish, trees and grazing pasture all rely on the shallow circulation of water in the unsaturated and saturated zones. This circulation is maintained by the system of perennial and ephemeral rivers, open water and local and regional aquifers. The use of a supply driven approach, predicated upon averaged resource estimates, to establish water development projects, notably irrigation, has resulted in poor performance of investments as well as environmental degradation. The aquatic habitats have been severely impacted and the transmission of externalities downstream has amounted to gross inequities across the basin.

6. Policy and Institutional Context. The context is characterised by the central presence of the Lake Chad Basin Commission (LCBC), created in 1964 when Cameroon, Chad, Niger and Nigeria signed the Convention of Fort Lamy (now N'Djamena), attached as Annex 9 which in

turn led to the creation of the LCBC. The role of the LCBC has been to ensure the most efficient use of the basin's waters, to co-ordinate regional (as opposed to national) development, and to assist in the settlement of disputes that might arise between and among the basin states. The original four signatory countries have now been joined by the Central African Republic. The LCBC has been the vehicle for a set of diagnostic studies carried out in the 1980s and the resulting Lake Chad 'Master Plan' which was finalised in 1992 and ratified in 1994. The LCBC has also been the vehicle for the GEF PDF-B work which has achieved consensus on a "Strategic Plan" to address basin degradation. The Fort Lamy Convention recognises the sovereign rights of the member States over the water resources in the basin, but forbids any unilateral exploitation of the lake water, especially when such use has a negative effect on the interests of the other states. It also recognises the right of the member States to plan projects, provided that they consult the LCBC beforehand. However, the Member States were supposed to refrain from adopting any measures likely to alter the lake's water balance, its exploitation by other riparian states, the quality of its water and the biological characteristics of the fauna and flora in the basin. Lastly, the Member States must inform the LCBC of all projects planned within the "conventional" basin. (bearing in mind that this "old conventional basin", until 1994, excluded upstream active basins of the Komadogou-Yobe river and of the Chari-Logone rivers). After reform in 1990, the LCBC has been trimmed and now has an annual budget of USD 1000,000, 50% of which is used for operational activities and 40% for development activities. The budget consists of contributions from the 5 member States at the time, and was broken down as follows: 26% from Cameroon, Central African Republic 4%, 7% from Niger, 52% from Nigeria and 11% from Chad. National, sectoral and environmental plans exist in each country. National institutions are officially in charge of co-ordinating the implementation of Action Programme 21 in Chad, Cameroon, Niger and Nigeria. At national level, the relevant environmental institutions are;

- (a) Cameroon: the National Consultative Committee on the Environment and Sustainable Development (CCNEDD - 1997), which includes the Prime Minister, various ministers, professional associations and NGOs),
- (b) Central African Republic
- (c) Chad: The National High Committee on the Environment, which includes the Prime Minister and various ministers. (HCNE - 1995).
- (d) Niger: the National Council for the Environment and Sustainable Development (CNEDD - 1997), which includes the Cabinet leader, ministers, civil society, university and NGOs),
- (e) Nigeria: the Federal Environmental Protection Agency (co-ordination of ministers) backed by the National Advisory Council (governmental organisations, private sector, NGOs, community organisations, university) and by the National Council on the Environment (States). Almost all the States in the Federation have prepared a long-term Environmental Action Plan.

6. In addition, a Basin Committee for Strategic Planning (BCSP) has already been created through the LCBC to assist in the creation of the local initiatives. The BCSP comprises senior country officials, across key ministries such as environment, agriculture, and finance, to increase the likelihood that, where necessary, policy and administrative changes and funding priorities could be made to ensure replication of the most promising locally driven enterprises

TRANSBOUNDARY IMPACTS AND THE BASELINE COURSE OF ACTION

Transboundary Impacts

7. A transboundary analysis carried out under a PDF-B identified a set of hydro-environmental issues, transboundary impacts and the principal causes (see Annex 8). The causes are grouped into climatic and human. A clear separation between cause and specific impact cannot be made, but it is important to note that the primary climatic causes of lake decline, which is decrease in rainfall over the region, have significant impacts on the populations in the Lake Basin who rely upon lake and floodplain recession agriculture, pastoralism and fisheries. The flows and flooding characteristics causing these impacts are transboundary in nature and result in transboundary human consequences (such as transboundary migration) and significant changes in production and consumption patterns which are completely reliant upon the variable

and vulnerable natural resource base of the LCB and result in a spiral of environmental degradation.

Climatic causes

8. Lake Level Decline /Climatic Change. The considerable fall in the level of Lake Chad and loss of piezometric heads associated aquifers has resulted in a decline in perennial vegetation and an increase in vulnerability to erosion. Further, declining levels and continuing drought have led to transboundary migration of human populations, notably fishers from Niger, many of whom, in order to pursue fishing in the smaller Lake, must cross borders. This also results in increased ecological stress on upstream resources and abandonment of traditional, effective resource management practices. Another effect of declining lake-levels relates to the fishery. Dropping levels create problems of fishing access for two of the riparian states, Niger and Nigeria. With falling levels, Nigeria also experiences increased problems accessing surface water resources for its large-scale irrigation projects. Last, rainfall reduction has led to a decrease in wet season flooding, with the consequent effect of a decline in reception capability of natural habitats, especially those that are heavily water reliant.

Human Causes

9. Persistent Rural Poverty. A circular relationship between poverty and environmental degradation characterises this region, particularly in the more arid Sahelian zones on the northern margins of the basin. Regional poverty is a severe limiting factor and compromises the ability of the countries to invest in costly yet necessary state of the environment monitoring. The human pressures on the resource base include deforestation, bush burning, and unsustainable agricultural practices. This combination of increased human pressure and drought then exacerbates desertification and the cycle continues. These threats were reviewed at various country-level workshops across the region as part of the effort undertaken during implementation of the PDF-B. A synthesis of the results of these country-level workshops resulted in the identification of six negative consequences of the failure to address these threats. They include:

- (a) The potential for the mis-allocation of the water resource base, particularly between the large irrigated systems and elements of the natural system.
- (b) The formation of spirals of degradation, with one harmful action having a cascading effect resulting in additional harmful actions.
- (c) Increased competition for the natural resource base among production activities, leading to disputes that will prove difficult to resolve and will create serious tension between and among various countries and interests.
- (d) The creation of tangible threats to the environment with consequent environmental diminution.
- (e) A possible increase in pollution from such sources as oil drilling and production, mining, unsustainable agricultural practices, and increasing pesticide use.
- (f) Further deterioration of the natural environment if there continues to be an absence of co-operation at all levels and a continuing inability of existing institutions to develop and implement a clear and consistent strategy at the regional level.

10. Short Term Policy Focus. A focus on the short term often results in unsustainable policy decisions. The consequences of these unsustainable policy decisions include the absence of an integrated approach to water resources management at the national and basin levels, costly investment that is abandoned because of unforeseen changes in water availability, and construction of large dams upstream without taking sufficient account of downstream human and ecosystem considerations. Further, mining operations are often not sufficiently co-ordinated with regional water and environmental policies, to the extent such policies exist. This short-term policy focus is further characterised by the failure of development strategies in rural areas, including those related to human health, and the development of agricultural and industrial activities geared to production quantities often at the expense of environmental sustainability.

11. Non-existent or Unsuitable Water and Environmental Management Policies. The general absence of integrated, regionally based water management programs characterise the region.

There is insufficient knowledge of water resources generally and of the functioning of aquatic systems specifically. There is no effective system for monitoring the quantity and quality of freshwater resources, nor are there effective water quality protection programs. There is ineffective management of water demand and little attention paid to adapting production methods to natural resource limitations. Last, there is too little value accorded to water and the environment in economic policies, an absence of economic instruments and incentive measures, and an absence of specific programs to promote and support local initiatives.

12. Poor Intersectoral Program Co-ordination with Limited Public Participation and Impact. Low-level public participation and inadequate mechanisms to secure such participation further characterise the region. There is insufficient co-operation between and among sectors within countries, and between and among the countries themselves. Environment-centred public education is virtually non-existent. Enforcement is weak. Few efforts have been undertaken to harmonise legal frameworks at the regional level to protect and make sustainable the use of shared water resources. National and regional organisations do not respond or adapt well to rapidly changing circumstances. This poor adaptive capability makes it difficult if not impossible to effectively and equitably manage shared water resources. Last, donors historically have provided little incentive for the creation of a co-ordinated and sustained policy of long term assistance aimed at autonomous and lasting development.

The Baseline Course of Action

13. National Water Management. The basic framework for national water management is supported a number of bilateral and multilateral interventions: In **Cameroon:** The National Consultative Committee on the Environment and Sustainable Development, which includes the Prime Minister, various ministers, professional associations and NGOs), **Chad:** The National High Committee on the Environment, which includes the Prime Minister and various ministers. In **Niger:** the National Council for the Environment and Sustainable Development, which includes the Cabinet leader, ministers, civil society, university and NGOs). In **Nigeria:** the Federal Environmental Protection Agency (co-ordination of ministers) backed by the National Advisory Council (governmental organisations, private sector, NGOs, community organisations, university) and by the National Council on the Environment (States). Almost all the States in the Federation have prepared a long-term Environmental Action Plan. A National Water Resources Master Plan (1995-2020) was prepared to protect the supply of water resources, and in 1993 a legal framework for the development of water resources was set up at the Ministry of Water Resources. In 1998, Nigeria is to draw up national regulations for applying the Basle Convention on cross-border movements of toxic waste. Other national initiatives include;

- (a) UNDP is working through UNDESA on integrated water resources management (IWRM), and/or water supply and sanitation projects in the Lake Chad basin in Niger, Chad and in the CAR.
- (b) The World Bank is principally involved in Nigeria through the "National water rehabilitation project", the "National Fadama Development project", the "Small towns water supply and sanitation project" and in Niger where a water sector project is under preparation
- (c) Finland and a club of donors are working in Nigeria (with the IUCN, WWF, ICPB and the British Council) on the Hadejia-Nguru wetlands.
- (d) Holland and the European Union are working in Cameroon with the IUCN on the Waza National Park system and Yaéré flood plains.
- (e) France is supporting Chad, Cameroun and Niger, in the compilation of inventories of groundwater resources and environmental, and on a support to sectoral policy (agriculture, environment, hydraulic)

14. Regional Initiatives. This project proposal is based in substantial part on a set of diagnostic studies that have been undertaken in the past 15 years, notably the diagnostic environmental studies carried out in the 1980s and articulated in the Lake Chad Master Plan published in 1992. This initiative was nonetheless predicated upon the much smaller 'conventional' basin and an arguably limited environmental and development perspective. More importantly it did address the transboundary issues that have been identified in the preparatory

PDF-B work for this Project.

15. A Diagnostic Study of Environmental Degradation in the Lake Chad Conventional Basin (the 'Diagnostic Study') was undertaken by the United Nations Environment Programme (UNEP) and later was joined by the United Nations Sudano-Sahelian Office (UNSO). The Diagnostic Study included comprehensive descriptions of the resources of the Basin, detailed the then current approaches and measures being undertaken to address issues of concern, and identified the principal actors in the Basin. The findings of the Diagnostic Study were formally adopted by the Environment Ministers of the LCBC Member States in 1989, and the LCBC, through the Ministers, was empowered to prepare a Master Plan for the development of environmentally sound management of the natural resources of the Basin. The Diagnostic Study was followed by the development of the 'Master Plan', which was prepared by the LCBC with the direct assistance of the participating countries and with additional assistance from UNEP, UNSO, and the FAO. The Master Plan contained background information on the Basin, Master Plan purpose and objectives, natural resource management priorities, an overview of problems including an overview of constraints and opportunities for conservation and development, and a recommended Action Plan. The Final Report of the Master Plan was published and approved by the Council of Ministers in 1992 and ratified by the Heads of State in 1994 in Abuja. The Action Plan included a list of 36 priority projects that were seen to be an urgent necessity. Many of the priority actions that were described in the Master Plan are deemed to continue to be relevant today, and the activities of this project heavily reflect those very priorities.

16. PDF-B preparatory project. The most recent effort within the Basin is work undertaken during the PDF-B GEF intervention. The project PDF-B was approved by the GEF in 1995 and executed by UNDESA. This work resulted in an update of the Diagnostic Study and the Master Plan.. The specific results were:

- (a) Substantive consultations between riparian countries and with national stakeholders;
- (b) Improved co-ordination mechanisms;
- (c) Targeted transboundary problem analysis and synthesis;
- (d) An agreed Strategic Action Plan for the sustainable development of the LCB
- (e) A GEF project proposal.

17. The Strategic Action Plan For Sustainable Development of the Lake Chad Basin (The LCB Strategic Plan). This indicative plan defines the strategic approach adopted by the five countries, to protect the common and shared resource bases of the Lake Chad basin. The phased approach links, in a same vision, development needs and environmental issues, to overcome various barriers or threats identified in three studies." The physical hydrosystem ", " The socio-economic and institutional system" and " Environment and international waters". The Plan described also six priority actions that, in the judgement of Basin stakeholders, required immediate attention. A principal objective of the Plan was to address issues of a transboundary nature and to solicit GEF support. A programmatic approach has been defined to involve GEF support in its field of intervention, with other donors to reinforce the development baseline in coherence with the general sustainable development objectives adopted with the Plan. As with the recommendations of the LCBC Master Plan, many of the principal recommendations of the LCB Strategic Plan are reflected in the array of activities that are the subject of this proposal.

18. Over the many years that the countries have worked co-operatively to develop the Diagnostic Study, the Master Plan and the GEF PDF-B, they have recognised that movement toward sustainable development in the Basin will take considerable time. The long term vision for the agreed LCB-Strategic Plan has established three focal areas over an indicative period of 20 years :

- (a) Concerted Management
- (b) Integrated and Dynamic Operational Management
- (c) Empowerment and Incentive Actions

Overcoming the transboundary barriers and impediments to the achievement of objectives in these focal areas are the subject of this proposal. As was observed in the Diagnostic Study, the central lesson of development in West Africa over the last thirty years is simply that there are no

quick fixes to natural resource degradation and maintenance. It is impossible to predict at what rate technology transfer, appropriate training, and implementation of effective resource management will occur. In these respects, patience is a necessity, especially when new institutions and new webs of authority need to be created.

19. The Diagnostic Study, the LCBC Master Plan, and the PDF-B with its resulting Strategic Plan, when combined, constitute a level of consultation, diagnosis, and identification of priority national and transboundary environmental issues that, with the activities specified in this project, specifically to identify and prioritise the most significant transboundary threats, can be readily crafted into a GEF Transboundary Diagnostic Analysis (TDA) and a programme design comprising activities to address transboundary issues – a GEF SAP. Finalisation of a GEF TDA and formulation of a GEF SAP are specific project outputs (4 and 6 respectively). Other objectives of this proposal include initiating priority activities identified during the PDF-B project, establishing strengthened institutional mechanisms, designing and testing local implementation modalities, and enlisting additional donors. Beyond the TDA and SAP it is possible to envisage a second stage project. It is anticipated that this would be a full SAP implementation over an estimated five-year period. In summary, the level of country commitment to the objectives of this project is clear and compelling. Despite a recent history of civil strife at the national and international levels in the basin, there is a demonstrated and consistent level of co-operation and effort that spans decades and has resulted in the formal country development and ratification of numerous studies Conventions, and Ministerial level attention to the social and environmental plight of the basin that is rarely seen in other regions of the world. The countries have limited resources to act effectively on many of these problem areas, but they have certainly demonstrated the resolve to attempt to do so through this and many other projects that have been undertaken over years.

PROJECT PURPOSE AND THE RATIONALE FOR GEF FINANCING - THE ALTERNATIVE COURSE OF ACTION

LONG-TERM PROJECT OBJECTIVE

20. The long-term objective of the GEF project is to achieve global benefits through broad, basin wide participation in the development and implementation of measures that ensure that the integrity of the Lake Chad system is protected by integrated management of the basin's resources. This requires orchestration of both national and regional activities through a working system of basin governance. Measures are targeted to, among other things, mitigate the causes and effects of desertification in the region and building of capacity at regional, national and local levels to create enhanced adaptive and anticipatory capability. Special attention will be given to the Africa Integrated Land and Water Initiative of the GEF implementing agencies. The Project will complement, benefit from, and project personnel will create direct links to other GEF IW Projects in the Senegal River Basin, the Niger River Basin, and the Volta River, all of which are concerned with desertification issues and are part of the overall GEF effort to address land degradation issues in Africa. This long term vision and adaptability has been formally agreed by the riparian countries and implies;

“-resituating people's socio-economic development within the wider context of the use and management of water resources (including rainfall), which are fragile, limited, variable and uncertain, while emphasising the respective abilities of local populations and natural systems to adapt to changes (and their limits),

-comparing the various uses of water with the use of soils, forests, and the management of wildlife,

-aiming at forward-looking management that is capable of identifying long-term consequences and impacts (i.e. over the next 20-30 years) of the various development options for which choices have to be made in the short term. These impacts depend on the needs of present and future generations in the basin, in terms of natural resources, basic food resources and human safety in the face of unpredictable Project Managerable and uncertain weather conditions.” (Agreed LCB- ‘Strategic Action Plan’)

Project Purpose and Outputs

21. Purpose. The Purpose of the project is threefold. **First** to overcome barriers to the concerted management of the basin through enhanced collaboration and capacity building among riparians and stakeholders. **Second** to complete a TDA and prepare a descriptive framework for the concerted water management across the basin. **Third** to prepare a GEF SAP for long term implementation of priority actions to address transboundary issues. The implementation modalities will be tested under this project through pilot projects, stakeholder involvement, and demonstration of the capacity of riparian countries to implement. The GEF SAP is distinct from the LCB- ‘Strategic Action Plan ‘ prepared under the PDF-B activities since it will seek to study, test and formulate identified sub-programmes and design a programmatic intervention to address these specific transboundary issues. The agreed LCB-Strategic Plan is much broader in terms of a phased programmatic approach for sustainable development of the basin and seeks to involve all donors and actors along a common long term vision and a corresponding global strategy.

22. **Outputs**. The project will establish six principal outputs.

- Output 1: Project mechanisms: an established Program Co-ordination Unit (PMU) and nominated lead agencies to drive and co-ordinate TDA completion, pilot projects, policy initiatives and institutional linkages.
- Output 2: Enhanced regional policy initiatives and institutional mechanisms to address transboundary issues
- Output 3: Strengthened engagement of stakeholders
- Output 4: A completed TDA and a synthetic framework for concerted management of the basin
- Output 5: Demonstration projects to test and validate methodologies, stakeholder involvement and implementation modalities.
- Output 6: GEF SAP designed and endorsed with implementation methodologies validated and donor support mobilised

RATIONALE FOR GEF FINANCING

23. The economic, social, and environmental well being of participating countries depends upon the vitality and productivity of Lake Chad and its associated basins, including its groundwater resources which furnish critical in-situ values. The co-operatively prepared and unanimously endorsed Diagnostic Study, Master Plan, and the PDF-B submission and subsequent adoption of the Strategic Action Plan provide a sound technical basis for, and country commitment to, participation in OP #9 generally and specifically the Land Degradation Component of that OP. The objective of OP #9 is to support “...better use of land and water resource management practices on an area wide basis.” Under this OP activities supported are those that have “an area wide focus” and are to include measures that are “more proactive interventions aimed at protecting international waters.” A major focus is to support measures for “prevention of damage to threatened waters...” and the OP’s long-term objective “.... is to achieve global environmental benefits through implementation of IW projects which integrate the use of sound land and water resource management strategies as a result of changes in sectoral policies and activities that promote sustainable development.” The project overall is constructed consistent with this GEF guidance. Further, the objectives and programs of the Plan correspond to GEF guidance under this OP and make possible the formulation of the TDA and SAP prescribed as part of the International Waters Portfolio.

24. The Land Degradation component of OP#9 notes that “(A) a special linkage exists between land degradation in dryland areas and management of both surface and groundwater resources in transboundary drainage basins”. Indicative activities for the Land Degradation Component of OP #9 include, among other things, improved watershed and catchment management, adoption of sustainable land use and conservation systems, and support for necessary changes in sectoral and economic policies. Of particular significance for the project being proposed by this Brief is the GEF commitment to “(S)upport for preparation of water resources management strategies by riparian countries for a transboundary dryland basin....to

allow harmonising of sectoral water uses among basin countries in an environmentally sustainable manner.” This proposal contains explicit provision for addressing these GEF defined activities. In efforts related to the PDF-B and at the beginning of SAP formulation, the five Lake Chad Basin countries co-operating in this project have worked to meet the objectives of OP#9 generally and specifically the Land Degradation Component of that OP.

25. The proposed project will contribute significantly to the reduction of stress to the international waters environment in the Region. It also supports efforts of the five countries and Lake Chad Basin Commission to make changes in sectoral policies, target critical investments, and develop necessary programs consistent with the conclusions of the Plan. The long-term commitment of the countries is demonstrated by their strong participation in and unequivocal endorsement of efforts over 14 years. These efforts include the UNEP/FAO/LCBC co-operative endeavours in development of a diagnostic study and Master Plan, and the GEF supported PDF-B, and their continuing, strong endorsement of the work of the LCBC. GEF support will serve a catalytic role in the project and the continuing participation of existing donors will contribute to this multi-country, regional organisation, and multi-stakeholder effort. Linkages with the UNDP/GEF initiative IW:LEARN will provide for sharing of project results and replication of successful practices in other regions of the world and specifically among other groups of countries confronting issues relevant to land degradation.

PROJECT OUTPUTS , RATIONALE AND ACTIVITIES

Output 1: Project Mechanisms: An established Program Co-ordination Unit (PMU) and nominated lead agencies to drive and co-ordinate TDA completion, pilot projects, policy initiatives and institutional linkages

Rationale:

26. There is a need for a core co-ordinating unit that must work closely with the LCBC, the institution designated by the countries as the responsible entity for projects of a regional nature. This mechanism will be created in consultation with the respective GEF country focal points, the LCBC, UNDP Resident Representatives, and government officials as necessary. In addition to this basic project need, it is intended that activities of the project be made complementary with activities of related, other GEF projects in West Africa. Most notably these include the UNDP-GEF project in the Niger River Basin and the WB-GEF Project in the Senegal River Basin, both projects in the GEF IW portfolio under OP #9.

- Activity 1.1** Recruit the Project Manager (PROJECT MANAGER), public participation and communications expertise, and requisite technical, administrative and secretarial support.
- Activity 1.2** Create and organise the PMU to facilitate and co-ordinate the work program of the project;
- Activity 1.3** Create and make provision for the conduct of meetings of the Co-implementation Project Task Force
- Activity 1.4** Promote, in co-operation with the participating countries and through the LCBC, country specific Inter-ministerial, and local co-ordinating committees, as necessary, and a scientific advisory committee to assist in the work specified in Activity 1.6 and Output 3;
- Activity 1.5** Support a Lead Agency for each participating country and a senior official to assume leadership of project activities and represent the participating country in meetings of the Project Steering Committee (PSC);

Output 2 Enhanced regional policy initiatives and institutional mechanisms to address transboundary issues during and beyond the life of the project

Rationale

27. Adaptive capability and anticipatory planning, to be fully effective, must be not only permissive at national and regional levels but encouraged and incentives created to effect adaptive response capability at the local level. This presumes that an effective system of basin

governance is in place and that the key players in that system are accurately identified. At present, national and regional institutions are not adequate to the task. The participating countries are members of the LCBC. The LCBC was created through the mechanism of the Lake Chad Basin Convention (Annex 9). The theoretical powers of the Commission are quite broad, including, *inter alia*, provisions related to prior notification, the monitoring of study progress and works related to water resources, and the authority to examine complaints and contribute to the resolution of differences of opinion among member countries. In practice, however, the countries have from time-to-time turned to other authorities to address issues in the conventional basin without involvement of the LCBC, even though the issues to be addressed fell within the mandate of the LCBC. If the LCBC is to assume a leadership role in SAP implementation, its responsibilities, prerogatives, and resources must be adequate to the task. As part of their commitment to this project, the countries have agreed to undertake a review of the LCBC consistent with strengthening its institutional capacity to undertake substantial execution authority in the next project phase. Further, the countries, as part of their commitment elaborated in the LCBC Convention and the Plan, have agreed that policies and strategies for agricultural production, environmental protection, flora and fauna, stock-rearing, fisheries and industrial activity can no longer be managed independently in each country if there is to be sustainable development. The World Bank will be taking lead responsibility for activities 2.1, 2.2, 2.4 and 2.5. Of particular note is Activity 2.3. Under this activity, the LCBC will host a Stock-taking Conference between the Lake Chad basin project and associated GEF projects as a means of ensuring the effective transfer of lessons learned and effective co-ordination and co-operation. To effect such policies and strategies described above the countries have committed themselves to the following activities related to current and possible future institutional considerations and mechanisms:

- Activity 2.1** Review the current functions and responsibilities of the LCBC with a view to strengthening and improving its functional capabilities, regional effectiveness, and ensuring a sufficient level of finance for its operations;
- Activity 2.2** Identify actors in water resource and related land and environmental policy implementation in each country
- Activity 2.3** Through the PMU and the LCBC co-ordinate activities with other related GEF projects, such as those in the Niger, Volta and Senegal River Basins, including technical exchanges and field visits as necessary.
- Activity 2.4** Define and promote the integration of transboundary water and environmental policies into the National Development Plans;
- Activity 2.5** Undertake an assessment of current, relevant agreements, protocols, conventions statutes and other relevant legal frameworks in each country, including recommendations for incentives and harmonised legal frameworks to enable an integrated regional approach toward long-term management of the Basin's resources;
- Activity 2.6** Establish the necessary structural arrangements for participating countries to review, harmonise and co-ordinate frameworks, regulations and approaches for the improved transboundary management of issues such as power generation, irrigation, downstream riparian considerations, fisheries, water quality and effluent standards, diversions and consumptive uses, and the creation and use of economic instruments;

Output 3 Strengthened engagement of stakeholders

Rationale

28. Strategies and discrete actions that can protect and lead to the effective management of the LCB aquatic ecosystems must be undertaken at the local level where the greatest capacity for adaptability resides. While all affected interests will have access to project participation activities, special attention will be given to affected local populations that rely on the resources of the Basin for their sustenance, and have shown an ability to adapt to rapidly changing natural and human-induced changes in the natural system. Provision will thus be made to ensure that people living within the basin are given full opportunity to participate in project definition and project implementation. Local level participation, including NGOs and, to the extent practicable

the private sector, will be actively promoted during the project as their participation is deemed as essential to project success. Involvement of the private sector would become especially important as a means of assessing the environmental implications of an oil field exploitation and a pipeline that is planned to transect an environmentally sensitive area of the LCB in Cameroon and Chad. Within the framework defined for each sub-basin, and in collaboration with existing basin sub-commissions and other support mechanisms, local authorities and populations can undertake local sustainable development initiatives, in effect developing local Agenda 21s. The results of these locally driven exercises would include project specific suggestions that would be reviewed by the Basin Committee for Strategic Planning (BCSP), an entity that has already been created through the LCBC to assist in the creation of the local planning initiatives. The BCSP would select, based on the principles of sustainability, replicability, and “scale-ability”, the most promising project suggestions and existing, sustainable local practices for funding as pilot demonstrations in the SAP implementation phase of the project, and as necessary continue to function beyond the life of the GEF project.

- Activity 3.1** Create and provide resources for a Steering Committee for the engagement of stakeholders and key user groups at all levels
 - Activity 3.2** Formulate, plan and execute 15 stakeholder group exercises (3 in each participating country);
 - Activity 3.3** Support for 15 final workshop reports including recommendations for pilot projects in the SAP implementation phase of the GEF project; and
 - Activity 3.4** Support for preparation of a final report, including recommendations, to assist governments and the LCBC to begin implementation of key results from the user group exercises.
 - Activity 3.5** Develop a regionally based methodology and mechanism for stakeholder participation at all levels including provision for environmental impact studies,
- Output 4 A completed TDA and a synthetic framework for concerted management of the basin**

Rationale

29. An adaptive and anticipatory capability requires good information. Previous efforts, such as the Diagnostic Analysis, the Master Plan and the PDF-B project, have generated substantial information on many of the issues confronting the participating countries. The TDA will need to determine the precise linkages between environmental and socio-economic systems and their transboundary impacts. It is expected that the finalised TDA will refine the priorities identified in previous studies and consultations. It is expected that these will include the definition of threats to the overall basin and lake balance, the social and related environmental transboundary nature of population movements, cross-border fisheries issues, navigation and trade, and the transboundary aspects of inter-community dependence emanating from the activities within the basin. The TDA will build upon work undertaken during the PDF-B project. In particular, work undertaken by the participating countries during the PDF-B project concluded that the means for accurate and monitoring of resource flows and uses do not exist. This seriously impedes the reconciliation of existing and emerging disputes. Specific hydro-environmental data is lacking and a broad range of relevant scientific studies in the region have not been synthesised into a working basin-wide framework. In addition, there is little monitoring of industrial discharges. Data analysis at the national level, to the extent that data is available and has been analysed, is not effectively disseminated among the relevant institutions at national and international levels. Even where raw data is available, the mechanisms for national and international analysis are absent. Therefore a long term objective of the countries and the LCBC is the establishment of a sustainable, functional, basin-wide meteorological, hydrological and hydrogeological network. GEF funding can only be used to support the completion of the transboundary (international) analysis. To the extent possible key measurements will be taken over the first three years of the project to establish an international datum for the LCB. Work will then be undertaken to identify sustainable financing mechanisms for a Lake Chad basin monitoring system.

30. Unless the essential character of the LCB groundwater resources are known, anticipatory planning and adaptive capability will not be possible. It is clear that some aquifers systems of the

Basin are already under pressure and that groundwater in general will become increasingly critical for the provision of potable water supplies and water for crop and livestock maintenance. As indicated, a clear regional hydrogeological overview is not available and specific knowledge about the groundwater resources will need to be sharpened. Without more detailed knowledge of such issues as surface-groundwater interactions and the identification of hot-spots, planning for the sustainable use of the key aquifers is impossible. Activity 4.3 will fill specific gaps on groundwater knowledge and other hydraulic issues in the basin as a basis for management decisions. Activity 4.3 will also complement work in the Chari-Logone aquifer that is being funded by the Bundesministerium für Wirtschaftliche Zusammenarbeit und Entwicklung (BMZ) and executed by UNESCO. The active BMZ project and GEF commitment will be used by the PMU, the participating countries and the LCBC to leverage other donors to undertake detailed groundwater assessments.

- Activity 4.1** Compile existing scientific, hydro-environmental and socio-economic data and information (including groundwater, aquatic ecosystems and water consumption). Prepare a descriptive basin framework and establish key processes and hot-spots. Data and descriptive models to be hosted by the LCBC.
 - Activity 4.2** Undertake a gap analysis of existing data to define a basin-wide monitoring network;
 - Activity 4.3** Support for the development of key water resource measures (e.g. the hydrostratigraphy in the Chad Formation, updating of rating curves of existing hydrological stations to determine low flow and flood conditions and specific water quality measurements) in order to refine the Lake and sub-basin water balances and complete the TDA.
 - Activity 4.4** Establish key environmental indicators in the Lake Chad Basin to verify compliance with existing and future management plans and, ultimately, to assist in evaluating GEF SAP implementation;
 - Activity 4.5** Develop risk analysis capability within the participating countries with the objective of, among other things, assessing regional-level hydro-environmental risk and identification of risk-management systems and approaches; and
 - Activity 4.6** Assemble a basin-wide synthetic framework for surface/groundwater interaction within the Lake Chad Basin to pre-identify long term consequences of development alternatives.
- Output 5 Creation of Regional Programs and initiation of demonstration projects to test and validate methodologies, secure stakeholder involvement and develop implementation modalities.**

Rationale

31. The regional initiative and supporting mechanisms require implementation through national, regional and local level mechanisms. These are mechanisms over which a regional initiative has no jurisdiction. However, a pre-condition to the implementation of the GEF SAP is that SAP interventions can be executed at national and local levels. Notwithstanding the commitment made during the project PDF-B, in which countries reached high level agreement on priority actions that need to be urgently addressed, the precise mode in each sub-basin needs to be determined and tested with local and national actors and explicitly linked to the regional initiatives through an integrated basin approach in order address the priority transboundary concerns. Therefore specific demonstration projects will be articulated at the end of the first year of the project on the basis of the TDA findings. These will build on the existing development and environment initiatives and will be designed to add global value to these interventions by addressing transboundary priorities. With regard to activity 5.5 the IUCN which has expressed an interest in this issue will be asked to directly participate in the activity. This initiative is anticipated in the priorities identified in the LCBC Master Plan and also in work undertaken during the PDF-B, the articulation of the LCB Strategic Plan and the subsequent agreements reached by the LCBC Council of Ministers. It will focus on new institutional mechanisms to link local, national and regional planning initiatives. In addition, an additional PDF-B support to be executed by the World Bank will aim to pre-identify suitable mechanisms and targets at regional national and local level. Taking into account the findings/results of the synthetic

framework (Activity 4.6), the country-identified priorities requiring immediate implementation will result in the following activities, each of which will have provision for stakeholder participation:

- Activity 5.1** Develop and begin implementation of a regional program to improve existing and define new protected areas, including the creation of corridors to link existing and new protected areas;
- Activity 5.2** Develop and begin implementation of a regional program, including establishment of five pilot demonstration sites, to protect immediately threatened aquatic ecosystems;
- Activity 5.3** Develop a regional program aimed at reducing growing water demand with an emphasis on identified hot-spots identified in the LCB Strategic Plan;
- Activity 5.4** Support development of a regional mechanism to create and implement a regional program to anticipate future pollution threats, including those that may derive from increased oil exploration, drilling, production and transport, and build capacity to prevent their occurrence; and
- Activity 5.5** Support a regional mechanism to develop integrated basin approaches (including floodplain management) in the Kamadagou-Yobe and Chari- Logone sub-basins. Using with full stakeholder participation, design and initiate basin development and management plans, with supporting decision aid tools, to maintain the integrity of sensitive wetlands systems downstream and promote sustainable development.
- Activity 5.6** Feedback of demonstration results into SAP design through the PMU.

Output 6 GEF SAP designed and endorsed with donor support mobilised

Rationale

32. Donor support in the basin is limited at present. As previously suggested, early and successful country and LCBC implementation of the pilot demonstration activities, and indeed the GEF approval of this Project, are likely to result in re-invigorated donor interest for work in Lake Chad Basin. Leveraged investments, further to the initial GEF investment, will be incorporated into the appropriate elements of the Project. Project resources will be used to assure the preparation of all necessary documentation, meetings and conferences to mobilise financial support for the Project. The World Bank will play a lead role in co-ordinating and organising donor support for the SAP since it is currently assisting Nigeria and Niger in setting the policy frameworks for water related investments and will be preparing national investment programmes during the project period. In addition, current World Bank activities in Niger and Nigeria are supporting the development of national water policies and will have direct links with project outputs. The World Bank will extend its policy review efforts to the other participating countries that are the subject of this proposal. It is expected that World Bank co-implementation of the project will result in additional leveraging of resources for the GEF Project. It is further anticipated that the bulk of financing for the next phase of the project, the SAP implementation phase, will come from non-GEF sources. It is therefore important to develop an adaptable and flexible arrangement with development partners – governments, donors, NGOs and basin stakeholders who will provide financial, technical, and human resources for implementation. The design of investment vehicles and the production of prospectus material to match investment opportunities with investors will be essential, as will the training of Government personnel in this field material and training will be developed and provided to ensure the Lake Chad Basin initiative can leverage sufficient funding to realise both an enhanced domestic baseline and global benefits. Donor consultation, both informally and through a formal donor conference, will occur within 90 days of final project approval so that early buy-in to the Project can be secured. Provision is made for an additional donor conference during year three of the project to assist in securing broad donor support for SAP implementation.

- Activity 6.1** Development and implementation of a plan for continuing donor contact;
- Activity 6.2** Planning and implementation of 2 donor conferences, one shortly after GEF project approval and one immediately prior to SAP implementation;
- Activity 6.3** Present the TDA and the GEF SAP to Inter-ministerial Co-ordinating Committees

and the LCBC,; and formalise a regional agreement on the GEF SAP

Activity 6.4 Development of donor conference reports and preparation of a strategy for ongoing project finance.

RISKS AND SUSTAINABILITY

RISKS

33. The long term success of regional scale management programs, such as the one proposed here depend, *inter alia*, on the political willingness of the participating countries to co-operate, their willingness to continue project programs and approaches after the life of the GEF intervention, and the extent to which activities successfully engage end users at the community level.

34. In relation to political willingness, the level of project risk is seen as moderate. The participating countries have few economic resources, have witnessed recent national and regional strife and, with the continuing drought, lack of donor support, and short term priorities such as human health, education, basic sanitation, and nutrition, it is difficult to create a focus on what appears to be longer term environmental imperatives. This situation is somewhat mitigated, however, by a growing realisation on the part of the countries that environmental sustainability is inextricably linked to food production, tourism, sanitation, population movements, and thus regional stability. This growing realisation has led the countries to participate effectively in the work undertaken during the Diagnostic Study, Master Plan, the PDF-B and, subsequently, in other endeavours. There is growing evidence to support a conclusion that the countries, notwithstanding to focus on short term priorities at the expense of environmental integrity, are increasingly committed to a regional approach to shared environmental concerns as a means of ensuring sustainability of their shared, fragile resources. Political will and co-operation were expressed for the project and its aims by country participation in and high level, formal endorsement of the results of the Diagnostic Study, the Master Plan, and the PDF-B developed Strategic Action Plan.

35. The risk of GEF project programs, and activities related to them, ending after the life of the project are seen as moderate. It is unlikely that the countries can, without greater donor support than is now the case, sustain project efforts. The ability of the countries, with GEF assistance, to solicit enhanced donor support will be crucial to sustainability of project efforts.

SUSTAINABILITY

36. *Government Commitment* As previously mentioned the participating countries have worked together and well during preparation of the Diagnostic Study, the Master Plan and the GEF financed, DESA implemented PDF-B. Country official assistance in preparation of and participation in national and regional workshops, workgroups, and steering committees has been consistent and committed.

37. *Financial Sustainability* The financial commitment of Governments is at this time largely in-kind. There has been recent re-invigoration of donor commitment to direct and related objectives of the GEF project as evidenced by assistance from the German BMZ, the EU, and Islamic Development Bank. Countries continue their financial commitment to the LCBC and contribute 10% or more to each project that has been the subject of donor assistance. As the project is implemented the UNDP will consult on an ongoing basis, at the Task Manager level, with regard to the provision of resources necessary to securing World Bank assistance to seek project-related investment both during the project implementation period and post-project. The World Bank will take the lead IA role in the organisation of the donor conferences.

STAKEHOLDER PARTICIPATION AND IMPLEMENTATION ARRANGEMENTS

Stakeholder Participation

38. Stakeholder participation was a key and successful ingredient of work undertaken during the execution of PDF-B activities. The current project proposal will build on and add to the level of public involvement that began in the PDF-B phase. It will do this through the involvement of communities in the creation of mini-Agenda 21,s and through the recruitment of stakeholder participation from the NGO community, community and commercial fishers, herders, representatives from the agricultural sector, and representation from the private sector, most particularly the petroleum industry. Stakeholder participation will also be sought in the development and implementation of all other elements of the project, with particular emphasis on the various pilot demonstration projects and the finalisation of the TDA and the GEF SAP. It has already been agreed by the countries in the agreed LCBC Strategic Action Plan that a genuine commitment to stakeholder involvement is imperative as the only way of ensuring co-operation at all significant levels, promoting sustainable and productive engagement with local environments and involving the private sector (mining and petroleum industry) and locally elected organisations in seeking negotiated solutions to environmental degradation.

Project Implementation and Institutional Framework

39. *National and Regional Institutions.* Direct and ongoing oversight of project activities will be the responsibility of the executing agencies through the PMU. The PMU will comprise a Chief Technical Officer, Public Participation and Communications Expertise, and requisite administrative and secretarial support. Consultants will be retained as necessary and priority will be given to the recruitment of national consultants as available. The LCBC will play a key and ongoing co-ordination role with and on behalf of the participating countries. The LCBC will also be undertaking the implementation of specific project activities. A co-implementation Project Task Force (PTF) will be created. The PTF will generally oversee project implementation activities. Its membership will include representatives from the participating countries, the LCBC, participating GEF implementing agencies, the executing agency. The PROJECT MANAGER will also be a member of the Project Task Force, which will meet at the call of the Chair, who will be selected by the PTF membership. comprises both national and regional initiatives. Thematic and geographic Committees will be created as necessary to continue and finalise development of the TDA and the SAP.

Project Implementation

40. The project will be implemented according to the provisional workplan presented in Annex 5. UNOPS will serve as the Executing Agency for UNDP and as such be responsible for the PMU and its activities. World Bank executing arrangements will be applied in the context of national activities through its existing national projects and offices. The Executing Agency role for UNOPS, working in close collaboration with UNDP country offices, will assure that the technical assistance to the participating countries that has been provided since 1990 will continue and guarantee that the national and regional priorities agreed by the riparian States are substantively and coherently accommodated within the GEF SAP. Consistent with the comparative advantage of UNOPS, the project will have direct links to the inter-governmental debate in the Commission on Sustainable Development, the international convention mechanisms of the UN Secretariat and important links to other UN agencies implicated in land and water management.

41. The World Bank will collaborate in the important area of policy reform in the participating countries, and bringing to bear its strong technical presence at the national levels, and assist in the identification of and actions leading to project related investment follow-up. . A parallel PDF-C proposal has also been developed by the World Bank to further refine details of the pilot demonstration projects and the groundwater/conjunctive uses aspects of the project.

42. The UNDP role will be to contribute its on-the-ground strength and resulting trust it builds with national governments, directly facilitate workshops and the convening of key stakeholders consistent with its comparative advantage in capacity building, work to secure national country-based financial resources to complement project activities, and provide important links to other UN Agencies.

43. The respective UNDP and WB Task Managers will be in direct and ongoing contact to facilitate the work of the projects and to ensure maximum levels of co-operation to bring about project success. As an immediate step the IA's will compile its respective water activities within the project area and suggest how these activities can contribute to the basin wide program. Specific additional joint activities will be sought and acted upon by the respective Task managers as the project is developed and implemented. As the pilot demonstration projects constitute the country-identified most urgent priority actions, and since successful country and LCBC efforts to implement these priority actions are deemed necessary to build donor confidence in the region, implementation of the pilot projects should begin as soon as possible after project approval.

44. The Africa Integrated Land and Water Initiative was launched in March 1999 by the Heads of the Global Environment Facility (GEF) Implementing Agencies – UNDP, UNEP, and the World in which they agreed to forge a new strategic partnership for inter-agency collaboration on land and water degradation with initial emphasis on Africa. It recognises that land and water resources are key to the economic development of drylands.

INCREMENTAL COSTS AND PROJECT FINANCING

45. Incremental Costs. Total costs for the project are calculated at US\$18,066,800 (including \$693,500 of PDF A, B, and C funding) of which the GEF contribution is US\$10,443,500 and co-financing is US\$7,293,300 based on government contributions, anticipated Implementing Agency inputs and expressions of interest received from NGOs and bilateral donors. The co-finance calculation does not include the ongoing programs of the UNDP, the World Bank and the contributions of other organisations that directly complement and will assist in the execution of specific project outputs. The incremental costs attached to this GEF project are linked principally to overcoming barriers to concerted management of the basin, completion of a TDA and the subsequent development and negotiation of the SAP. Overcoming these barriers has specific capacity building implications and associated costs that lie beyond the domestic baselines of the riparian countries. Annex 1 presents a summary of the domestic and global benefits and costs together with a matrix of individual country baseline and alternative costs associated with each project objective.

46. Project Financing. The financing of the project within the context of the agreed SAP will be ensured by the commitment of all five Governments and bi-lateral and multilateral donors who have expressed an interest in supporting LCBC and the SAP process. Co-financing figures are indicative of the anticipated participation of on-going projects to related activities of the GEF project. As an example UNDP is funding in Chad US\$ 2.6 million in water and land resources projects. It has been estimated that 10% of this amount will be directed toward transboundary activities. LCBC has an annual mean budget, funded by member States, of US\$ 1,180, 000. It has been agreed by LCBC that an equivalent percentage will be applied over the life time of the project (thus \$ 411,800). The contribution in kind accepted by the five Governments through their on-going projects represents a total of \$ 1,750,000. In addition, the German co-operation (BMZ) is funding the LCBC regional project "Study of the Chari-Logone Groundwater resources" for an amount of \$617,600 and it is expected that outputs of this project will be developed and used by the GEF project. The total of co-financing is \$ 7,293,300. DGID is providing co-finance of US\$ 1,930,000 while DFID is providing an additional US\$ 2,078,900.

Table 1. Summary GEF Project Financing (US\$)

Project Outputs	TOTAL	Co-financing	GEF
Output 1: Project Mechanisms An established Program Co-ordination Unit (PMU) and country lead agencies	3,239,000	650,000	2,589,000
Output 2: Enhanced regional policy and institutional mechanisms	1,785,800	661,800	1,124,000
Output 3: Strengthened stakeholder participation and education, involvement of stakeholders through development of local initiatives	1,571,000	360,000	1,211,000
Output 4: Key Measurements, TDA and synthetic basin framework	3,267,600	1,017,600	2,250,000
Output 5: Demonstration projects to test methodologies, stakeholder involvement and implementation modalities.	7,053,900	4,503,900	2,550,000
Output 6: Donor support mobilised for GEF SAP and LCBC Plan implementation	456,000	100,000	356,000
TOTALS	16,893,300	7,293,300	10,080,000
PDF (Block A and B)	693,500	0	693,500
Total Project Financing	18,066,800	7,293,300	10,773,500

MONITORING, EVALUATION AND LESSONS LEARNED**MONITORING AND EVALUATION**

47. Project objectives, outputs and emerging issues will be regularly reviewed and evaluated annually by the PTF. The project will be subject to the various evaluation and review mechanisms of the UNDP, including the Project Performance and Evaluation Review (PPER), the Tri-Partite Review (TPR), and an external Evaluation and Final Report prior to termination of the Project. It is anticipated that the scientific advisory committee will be instrumental in assuring the scientific quality and standard of project implementation and reporting. The project will also participate in the annual Project Implementation Review (PIR) of the GEF. Particular emphasis will be given to emerging GEF policy with regard to monitoring and evaluation in the context of GEF IW projects. This document generally, and more specifically the logframe in this document, will be used to identify relevant Process Indicators, Stress Reduction Indicators, and Environmental Status Indicators that will serve to inform the M&E process and be adopted by the participating countries.

LESSONS LEARNED AND TECHNICAL REVIEWS

48. The project will be involved from the start in the GEF International Waters Learning, Exchange and Resource Network Program (IW: LEARN). IW:LEARN is a distance education program whose purpose is to improve global management of transboundary water systems. It will provide structured interactive conferencing capability across and within the GEF International Waters Portfolio and will allow participants in GEF IW projects to share learning related oceans, coastal zone management and to other river basins in Africa and in other development regions. For environmental professionals working on GEF related projects IW:LEARN will greatly expand opportunities for peer, collaborative research with physically distant colleagues, opportunities to exchange best practices and training modules among projects, and the delivery of short courses.

List of Annexes Included

Annex 1	Incremental Cost Matrix
Annex 2	Logical Framework Analysis
Annex 3	Letters of Endorsement
Annex 4	STAP Roster Technical Review
Annex 5	Response to STAP Technical Review

List of Attachments

Attachment 1	Detailed Project Budget
Attachment 2	Project Timetable
Attachment 3	Institutional Arrangements
Attachment 4	Project Organogram
Attachment 5	Monitoring and Evaluation Details
Attachment 6	Reporting Requirements and Legal Context
Attachment 7	Terms of Reference for Project Personnel
Attachment 8	Pilot Demonstration Activities by Description/Logframe/Timetable/Budget
Attachment 9	Response to GEF Council Member Comments

List of Annexes (Available Upon Request)

Annex 6 -	Map of the Lake Chad Basin
Annex 7 -	Visual Depiction of Extent of Surface Water Lake Diminishment
Annex 8 -	Tables of Transboundary Environmental Impacts
Annex 9 -	The Convention of Fort Lamy
Annex 10-	Diagnostic Study of Environmental Degradation in the Lake Chad Conventional Basin
Annex 11	Agreed draft public involvement plan for the project
Annex 12 -	Summary of PDF-B prepared Strategic Action Plan

ANNEX 1: Incremental Cost Annex

1. Regional Context and Broad Development Goals

1.1 General poverty characterises the development situation in the basin . Poverty is also a key factor for all environmental threats. The five countries are among the last forty countries in the Human Development Index ranking. Two countries are among the last ten, and one country is in fact just before the last one in the world. The mean real GDP per capita for those countries is decreasing (in 1987 equivalent \$) from 1980 (\$ /pc 463) to 1990 (\$ /pc 425) and 1995 (\$ /pc 378). (Ref. UNDP Human Development Report 1998 - p.142). At the same time, the mean figures for the same indicator are increasing for developing countries taken as a whole. The same observation can be made for this specific region for two other indicators : food production per capita and daily per capita supply of calories. They are also decreasing whereas the opposite trend can be observed, on average, for developing countries.

1.2 The socio-economic pressures on the region's limited water resource base have driven significant levels of investment in water infrastructure, particularly in Nigeria. In Chad new irrigation projects are planned. In both countries questions remain concerning, at the same time: financial constraints, food security, sustainability of and efficiency of those investments, in particular in terms of water management. The development baseline appears to be insufficient in this region to overcome current trends, despite some positive signs for West Africa, concerning a new dynamism in economic growth, in conflict resolution, and in Civil society participation.

1.3 UNDP and the World Bank are already funding water resource management programmes in Chad, Niger and Nigeria. Governments of the five countries have provided funds to LCBC since 1964 and have committed funds to environmental assessments of the part of their basin in so far as national priorities have been addressed.

2. Global Environmental Objective and Incremental cost Analysis

2.1 The significance of the basin has been highlighted by the international interest in the hydro-ecological state of basin flood plains and of the Lake and the bio-diversity they support. The incipient degradation under the baseline conditions will threaten aquatic flora and their associate fauna both in the Lake Chad area and in the source sub-basins. (LCBC SAP – Annex 10).

2.2 If the transboundary issues are not addressed, the direct and indirect threats to this international water body will result in the progressive breakdown of the hydrological and ecological integrity of the LCB system. This will cause the global community to forfeit sizeable conservation benefits (including direct and indirect use values, and existence and option values).

3. Baseline

3.1 The scope of the baseline is set spatially by the natural limits of the LCB and the locus of external demands upon the basin's resources, thematically by the project objectives (concerted management, water resource analysis and planning/programming), and temporally by the life of the project (4 years). The sectoral activities in the basin that involve direct water abstraction and disposal from and to the LCB watercourses are distinguished from activities that relate to mechanisms for concerted management, water resource analysis for the LCB, and the programming and planning of water related investments in the LCB. A proportion of these non-operational activities carried out by each country will be diverted into the alternative.

3.2 The PDF project completed an inventory of the existing, or signed, water and environment programmes funded by donors in each riparian country. This specific inventory is limited to the new conventional Chad Lake basin and for the duration of the proposed programme. Detailed tables of this **baseline** (split into structural investments and into non structural investments related to the GEF proposed activities") are given in Annex 1 of the agreed Lake Chad Strategic Action Plan. (see Annex 10 of this brief) The **detailed incremental cost matrix** is provided as

Annex 1 of this brief and compares, in terms of outputs and costs the baseline with the proposed activities.

4. The GEF Alternative

4.1 An alternative regional programme will generate benefits for the overall environment while striving to promote actions that are compatible with the economic and social interests of each country. It would create new opportunities for regional development by harmonising policies and enabling the requirements of all players within the basin to be taken into account. In a basin as complex and sensitive as that of Lake Chad, it is vital to integrate development and environmental policies, which are closely interdependent, right from the outset. The agreed "Lake Chad Strategic Action Plan", and in particular the way in which the Programme of Actions is implemented with the initial GEF support, and the progressive support of major donors, should aim at ensuring a flexible process whereby this integration of policies can take place. A GEF project for protecting the overall environment will be a vital means of mobilising, catalysing and generating national development projects, making the environment an essential component. Reciprocally, these national development programmes concerned with water and the environment, co-ordinated within a comprehensive strategic approach basin-wide (the SAP) will be decisive in upgrading the capabilities that need to be mobilised throughout the region to save the Lake Chad basin ecosystem. In conclusion, it may be predicted that without a regional back-up programme, sized to handle the scope of the work that has to be organised and carried out, there will be no other initiatives in the short or medium terms to provide the region's countries with complete assistance to deal with the environmental problems linked with the international waters of Lake Chad.

4.2 To avoid the overall environmental risks identified above, with the support in kind of Governments. The existing basic framework within the basin (regular operations of the LCBC) is covered by the member states. Certain other priority regional programmes would benefit from being co-financed with other donors in order to generate more wide-ranging actions and thus have a more rapid impact on the human and physical environments. These programmes will be formulated during phase 1 (2002-2006) and discussed with interested and concerned partners. At the national level, the components financed by the GEF could help to support existing or future programmes, integrated into national sustainable development programmes and into the strategic action plan for the entire basin.

5. Scope of Analysis

5.1 The functional system boundary for water, land forest and wildlife comprise much smaller sub-sets of the basin's geographic limit. This is because the hydrologically active area of the basin is much smaller (966,955 km²) and involves five riparian states. The topographic limits of the basin (2,381,635 km²) which cover large part of desert areas in Niger and Chad are effectively de-coupled hydrologically and hydrogeologically from Lake Chad. In 1964, four countries created the Lake Chad Basin Commission (LCBC), to handle the problems of development centred on Lake Chad in an area formerly referred to as "*the conventional basin*". This convention did not include the Central African Republic and excluded the large desert expanses of Algeria, northern Niger and Sudan and, in particular, excluded the upstream part of the active basins of the Chari-Logone and Komadugu-Yobe. This "*old conventional basin*" covered about 427 300 km². Since 1994, the Central African Republic has been a member of the LCBC and "*the new conventional basin*" has been enlarged to include the upper basins of the Logone-Chari and Komadugu-Yobe systems. It may now be considered that the LCBC's mandate covers the entire active basin (also referred to as the new conventional basin), which now covers **966 955 km²**, divided up as follows between the 5 countries:

Country	New area of conventional basin (km ²)	Population in 1991 (in thousands)	Density in 1991 (inh/km ²)
Cameroon	56,800	2,100	37
CAR	197,800	700	3.5
Niger	162,375	240	1.5
Nigeria	188,000	13,856	74
Chad	361,980	5,048	14
Total	966 955	21 944	22.7

Distribution of active basin (or "new conventional basin" according to LCBC (areas) and Harrison and Kolawole (population- PDF-B)

This new definition of the active Lake Chad basin thus takes into account almost all the water resources that supplies the lake, the Yaérés and the aquifers in the lake area. It is now possible, in each sub-basin, and for the whole basin, to envisage a concerted water resources management.

5.2 The thematic limits for this analysis are set by the project objectives to prepare for the implementation of a programme of concerted management through strengthened institutional mechanisms, transboundary analysis and programme design. Requisite institutional strengthening across the related sectors is of the essence. The design of the proposed project has taken into full consideration its complementarity with other existing projects in the region, particularly the World Bank and UNDP funded water reviews in Nigeria

5.3 The temporal boundaries for this analysis are set by the anticipated period of preparation for implementation and programme formulation, a four-year period. The project benefits will clearly continue to accrue beyond this time boundary of both the first stage defined by the project and the second stage of programme implementation. Baseline expenditures have been estimated across a time horizon from 1995 to 2005 to capture the relevant development and project budgets

5.4 Sunk costs, incurred prior to 1998 have been omitted from the analysis. The baseline captures investments within the LBC and specific elements associated with extra-basin demands for water. The Alternative captures the additional actions required to secure project objectives within the system boundary. There will be substantial leveraging of domestic baseline costs that address concerted management and basin analysis towards the globally preferred alternative.

6 Project Financing

6.1. Total baseline expenditures amount to US\$ 23,662,000 and reflects investments associated with water policy initiatives, including management and environmental protection, at national and to a lesser extent at regional level, over the period 1995 to 2005. The GEF would provide US \$9,750,000 in incremental cost financing for the alternative, which represents 40 % of the total baseline amount. This funding is targeted specifically at overcoming barriers by defraying the transaction costs associated with sustainable management of transboundary waters, and associated resources and ecosystems.

6.2 Co-financing figures are indicative of the anticipated participation of on-going projects to related activities of the GEF project. As an example UNDP is funding in Chad M\$ 2.6 in water and land resources project. It has been estimated that 10% of this amount will be valuably used in concerted operations. LCBC has an annual mean budget, funded by member States, of \$ 1,180,000. It has been agreed by LCBC that a same percentage applied over the lifetime of the project (thus \$ 411,800). The contribution in kind accepted by the five Governments through their on-

going projects represents a total of \$ 1,750,000. In addition, the German co-operation (BMZ) is funding the LCBC regional project "Study of the Chari-Logone Groundwater resources" for an amount of \$617,600 and it is expected that outputs of this project will be developed and used by the GEF project. The DGID and DFID are co-financing an amount of US\$ 1,930,000 and US\$ 2,078,900 respectively.

6.3 In the longer term, removal of barriers to sustainable use will widen the menu of development options available at a local level. But in the short term, the generation of the programme to address transboundary issues will result in mainly non-pecuniary benefits. For the riparian countries, tangible costs exceed tangible benefits in the intermediate term, providing little incentive to undertake this initiative without external assistance.

PROJECT INCREMENTAL COST MATRIX

Long-term objective : " To achieve regional and global benefits through, broad, basin wide participation in the development and implementation of measures that ensure that Lake Chad is sustainably protected by concerted, integrated management of the basin's resources"			
Cost/Benefits	BASELINE (B)²	ALTERNATIVE (A) 2000-2003	INCREMENT (A-B)
Domestic Benefits	<ol style="list-style-type: none"> 1. Countries unwilling to take unilateral action to strengthen water and environmental management, and bilateral assistance unwilling to fund water projects without any clear knowledge, or agreement, on sustainability of water uses, upstream and downstream. 2. Environmental management policies, strategies and programmes within countries are uncoordinated; by themselves, national efforts are insufficient to mitigate threats to river systems. National capacities to effect integrated land and water body management are limited. 3. National local players poorly sensitised to environmental concerns. 4. Countries face growing environmental, social and economic costs and a decrease in available natural resources, from degradation of the Lake Chad basin system. 	<ol style="list-style-type: none"> 1. Harmonisation of policies and standards for water and environmental management according to a common strategy (SAP) at basin level, with information and support of donors. 2. Co-ordination of management efforts between riparian countries through international co-operation. Institutional and human capacity building in the arena of integrated land and water management and basin space planning. 3. Targeted education and awareness efforts for sustainable development in the Lake Chad basin. 4. Efforts targeted at removing the root causes of water resources and environmental degradation, both current and future. 	<ol style="list-style-type: none"> 1. Countries able to strengthen water and environmental management without losing development funds for other critical short term priorities and without losing competitive position. 2. Interventions more effectively targeted at removing the root causes of threats, thus improving the efficacy and cost-effectiveness of national management endeavours. National capacities to implement a holistic resources management method at all levels are strengthened. 3. Civil society more responsive to environmental protection measures. 4. The ecological sustainability of development activities in the Lake Chad basin will be better assured, for each country.

² The baseline comprises only the directly relevant activities dealing with water policy and management. It does not include associated infrastructure investments which are estimated to amount to approximately US\$ 557million.

Global/Regional Benefits	<ol style="list-style-type: none"> 1. The policy framework for co-ordinating river management of the Lake Chad Basin is inadequate; regional co-operation is mainly limited to central and political levels. Donors, like others, are not informed and involved. 2. Lack of regional, sub-regional, national and local institutions able to co-ordinate strategy and action to plan and manage finite and vulnerable international water resources in a sustainable manner. 3. Limited avenues for public involvement in overall environmental management of the Lake Chad system. 4. Lack of a common instrument able to simulate long-term impacts of current decisions on regional stability and food security. 5. Lack of common cross-borders activities for measuring water resources, for exchanging information, for analysing costs-benefits of alternatives, for protecting wetlands and flood plains and for averting possible pollution threats. 	<ol style="list-style-type: none"> 1. Strengthening of policy and incentives for regional co-operation, involving all main players, in order to remove institutional barriers and make international waters a catalyst for regional co-operation, instead of a source of potential conflicts. 2. Create institutional mechanisms to guide and co-ordinate national plans and actions within a common regional vision and framework. 3. Develop mechanisms for engendering public participation in sound development planning and management at basin-ecosystem level. 4. Building of an enabling environment leading to a dynamic regional instrument able to aid regional decisions for maximisation of economic and social impacts, for all countries and communities, and minimisation of environmental impacts. 5. A set of horizontal activities are launched across sectors and borders in order to stimulate co-operation and capacity building. 	<ol style="list-style-type: none"> 1. Policy and incentive framework for effective regional cooperation for addressing cross-border problems are politically supported through a regional agreement and basic agreements on policy/institutional/legal and financial adjustments at national and sub-national levels. 2. Establishment of institutional framework across sectors, and across countries for addressing cross-border impacts and regional capacities are enhanced. 3. Public participation in management increases the sense of ownership of civil society over management efforts and in turn enhances prospects for sustainable basin development. 4. A common long-term vision for co-operative basin-wide water allocation, protection and planning. 5. An applied strategy towards integrated and sustainable management of the international waters of the Lake Chad basin, is launched.
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Output 1: An established Program Co-ordination Unit (PMU) and a Lead Agency in each of the participating countries to ensure inter-sectoral co-ordination for duration of the project.			
Cost/Benefit	BASELINE (B) (US\$ 1000)	ALTERNATIVE (A) 2000-2003 (US\$ 1000)	INCREMENT (A-B) (US\$ 1000)
Activity 1.1 Recruit the Project Manager (PROJECT MANAGER), public participation and communication expertise, and requisite technical, administrative and secretariat support.	No regional executing agent is active in multi-level and multi-disciplinary co-ordination of I.W.R.M. activities in connection with existing projects. Total : Zero baseline	Recruitment of highly qualified consultants and experts to support the full program implementation during 4 years. Total : 1,014	Appropriate human capacities developed to promote and support participatory practices, at all levels, and to insure a permanent evaluation and follow-up of transboundary activities. Cost to GEF: 1014
Activity 1.2 Create and organise the Program Co-ordination Unit (PMU) to facilitate and co-ordinate the work program of the project.	No operational and technical support available for a full regional project Total : Zero baseline	Creation of a PMU Total : 480	An appropriate regional unit is equipped and organised in order to efficiently deliver project outputs, give technical assistance and manage program activities. Cost to GEF: 480
Activity 1.3 Create and make provision for the conduct of meetings of the Co-implementation Task Force	 Total : Zero baseline	Regular meetings between external donors and UN and GEF technical agencies Total : 120	Co-ordination of GEF actions with UN and/or other donors. Cost to GEF: 120
Activity 1.4 In co-operation with the participating countries and through the LCBC, create country specific Inter-ministerial Co-ordinating Committees to assist in the work specified in Activity 2.3 and output 3	No inter-ministerial body at country level for I.W.R.M. of Lake Chad national sub-basin . Total : Zero baseline	Support for the creation, in each country, of an Inter-ministerial Committee for Lake Chad Basin (ICLCB) . Total : 475	National co-ordination reconciling , <i>at sub-national basin level</i> , regional development, land uses, food security, ecosystem health, and finite, vulnerable natural resources. Cost to GEF: 475
Activity 1.5 Support a Lead Agency for each participating country and a senior official to assume leadership of project activities and represent the participating country in meetings of the Project Steering Committee (PSC);	No operational lead agency in each country Total : Zero baseline	Six national (small) secretariats in order to manage national components of the full program, directed by a senior lead official, to ensure country program coordination with the project. Total : 500	 Cost to GEF : 500

Output 2: Enhanced regional policy initiatives and institutional mechanisms to address transboundary issues beyond the project life			
Cost/Benefit	BASELINE (B) (US\$ 1000)	ALTERNATIVE (A) 2000- 2003 (US\$ 1000)	INCREMENT (A-B) (US\$ 1000)
Activity 2.1 Review the current functions and responsibilities of the LCBC with a view to strengthening and improving its functional capabilities and ensuring a sufficient level of finance for its operations;	LCBC staff salaries funded with limited operational budget. Weak operational capacity for Integrated Resources and Environment Management (I.R.E.M.) through co-operation between stakeholders at all levels. LCBC's role is mainly at political level, and LCBC operational activities are of limited effectiveness. No evaluation of LCBC functions. Operational budget of LCBC during 3.5 years. Total : 2,352	Evaluation of LCBC functions, capacities and financial means and proposals in order to strengthen this regional organisation. Identification of needs and discussions to design terms of reference. Total: 2,427	Strengthening the role of the LCBC is crucial to obviate the risk that individual countries will give priority to greatest domestic benefits without taking into account downstream Interests Type: Complementary (not a national priority, necessary for overall benefits) Cost to GEF: 75
Activity 2.2 Identify stakeholders in water resource and related land and environmental policy implementation in each country	Limited operational support geared toward changes in national/sub-basin water management, in relation with environmental protection and transboundary water issues. FAC and UNDP/DESA supports work in Chad. UNDP in Niger. KFW in RCA. WB in Nigeria. Total: 300	Updated national water policies Total : 550	National water policies take into account transboundary water issues and encourage environmental protection Type: Complementary (domestic benefits but not a national priority) Cost to GEF: 250
Activity 2.3 Through the PMU and the LCBC co-ordinate activities with other related GEF projects in the Niger and Senegal River Basins including technical exchanges and field visits as necessary.	During the PDF-B process, additional UNDP resources funded DESA technical missions and harmonised national consultations inside 10 countries of Lake Chad, Niger and Senegal basins. This led to UNDP-GEF preparatory assistance (Lake Chad and Niger basins). Total : 50	Follow-up and co-ordination between three regional river basin programs (and possibly others in future) covering almost all the Sahel region. Total : 200	In support to the Convention against Desertification, harmonisation and optimisation of E.A. approaches as a contribution to a regional policy - at local, national and basin levels - for an integrated, concerted and sustainable management of water, land and other resources in the Sahel region. Cost to GEF : 150

<p>Activity 2.4 Define and promote the integration of transboundary water and environmental policies into the National Development Plans;</p>	<p>National development plans and projects are uncoordinated in relation with the management of water, and other basin common resources, and with the broad protection of those resources. GEF-PDF-Project</p> <p>Total: 450</p>	<p>Promotion of Policy/institutional/legal/financial adjustments at national and sub-national levels by legal decrees Study of consequences of each updated national water policy on national development plans and on major programmes or projects.</p> <p>Total: 700</p>	<p>Changes are promoted for National plans and projects design in order to take into account up-dated national water policies</p> <p>Type: Complementary (domestic benefits but not a national priority)</p> <p>Cost to GEF: 275</p>
<p>Activity 2.5 Undertake an assessment of current, relevant agreements, protocols, conventions statutes and other relevant legal frameworks in each country, including recommendations for incentives and harmonised legal frameworks to enable an integrated regional approach toward long-term management of the Basin's resources;</p>	<p>National legal frameworks generally do not take into consideration specific regulations for integrated water management at basin level, including transboundary water issues and environmental protection. LCBC meetings and contribution to the bi-lateral Niger-Nigeria commission.</p> <p>Total: 517</p>	<p>Facilitation of a harmonised legal framework for Integrated Resources and Environment Management (I.R.E.M). across sectors and countries, leading to enhanced co-operation.</p> <p>Total : 741</p>	<p>Enhanced cooperation facilitated by harmonised legal national frameworks concerning water.</p> <p>Type: Complementary (domestic benefits for local sustainable development, necessary for overall benefits)</p> <p>Cost to GEF: 224</p>
<p>Activity 2.6 Establish the necessary structural arrangements for participating countries to review, harmonise and co-ordinate frameworks, regulations and approaches for the improved transboundary management of such issues as power generation, irrigation, downstream riparian considerations, fisheries, water quality and effluent standards, diversions and consumptive uses, and the creation and use of economic instruments;</p>	<p>Local existing development projects –see S.A.Plan – funded by: World Bank, FED, BAD, FIDA, CFD/FAC, KFW, DANIDA, Netherlands, UNDP, UNICEF, WWFÖ, without links at the level of resources management: the sub-basin.</p> <p>Total : 0</p>	<p>Immediate implementation of an Interim Basin Committee for Strategic Planning. International agreement on principles of co-operation for sustainable and integrated water management for reconciling, at basin level, regional development, land uses, food security, ecosystem health, (and other water uses), and finite, vulnerable water resources.</p> <p>Total : 150</p>	<p>Written, country-endorsed agreement with specific mechanisms to improve the integration of water uses management, and the co-ordination of project supports, at sub-basin and basin levels basin.</p> <p>Type: Complementary (not a national priority, necessary for overall benefits)</p> <p>Cost to GEF: 150</p>

Output 3: Strengthened community level participation and education, involve stakeholders through development of local planning initiatives (mini-Agenda 21's)			
Cost/Benefit	BASELINE (B) (US\$ 1000)	ALTERNATIVE (A) 2000-2003 (US\$ 1000)	INCREMENT (A-B) (US\$ 1000)
Activity 3.1 Create and provide resources for a Steering Committee for the creation local development initiatives	Total : Zero baseline	Total : 90	Cost to GEF: 90
Activity 3.2 Formulate and execute 15 consultations (3 in each participating country)	Total : 1,292	Support 15 local planning initiatives for community level stakeholders to establish their sustainable development plans in line with sub-basin planning frameworks Total : 2,042	Cost to GEF: 750
Activity 3.3 Support for 15 final workshop reports including recommendations for pilot projects in the SAP implementation phase of the GEF project	Total : Zero baseline	Lessons learned from local consultations Total : 75	Cost to GEF: 75
Activity 3.4 Support for preparation of a final report, including recommendations, to assist governments and the LCBC to begin implementation of key results from the mini-Agenda 21 exercises	Total : Zero baseline	Lessons learned from co-ordination between local, national and regional initiatives Total : 15	Cost to GEF : 15
Activity 3.5 Develop a regionally based methodology for the conduct of environmental impact studies, (EIS) ensuring provision of stakeholder participation and the communication of results to stakeholder groups;	No basin based methodology, despite national projects with environmental components involving local stakeholders. Waza-Logone project and specific studies on the Hadejia-Nguru wetlands. Total : 4,800	A designed basin methodology Total : 5131	A country-agreed methodology for the conduct of EIS, with information and involvement of stakeholders. Cost to GEF: 331

Output 4: A completed TDA and a synthetic framework for concerted management of the basin			
Cost/Benefit	BASELINE (B) (US\$ 1000)	ALTERNATIVE (A) 2000-2003 (US\$ 1000)	INCREMENT (A-B) (US\$ 1000)
Activity 4.1 Compile existing scientific, hydro-environmental and socio-economic data and information (including groundwater, aquatic ecosystems and water consumption). Prepare a descriptive basin framework and establish key processes and hot-spots. Data and descriptive models to be hosted by the LCBC.	Piecemeal data collection in the framework of current local development projects. No spatial data on existing situation, nor extensive and reliable data concerning water resources, nor data concerning socio-economic and environmental impacts of basin resources uses. Loss of data collected in the field by past and on-going projects and duplication of effort. No regional synthesis of available data and information existing in each country. Total : 2397	With the support of each national I.C.L.C.B. (created with activity 1.4), country reports on a detailed inventory of existing relevant data and projects, with an evaluation of the quality of basic data, and of existing data bases and GIS. Collection of data bases on water resources in an agreed sub-basin and basin framework. Total: 2672	Updated knowledge of the current status, location and reliability, of existing data, data-bases and GIS, in each country. Existing data, information, and information systems concerning Lake Chad Basin are synthesised in a report for broad distribution through LCBC. Cost to GEF: 275
Activity 4.2 Undertake a gap analysis of existing data to define further needs to the establishment of a basin-wide monitoring network	A data-gap analysis and a basin-wide approach of monitoring are missing. Total: zero baseline	Gap analysis of existing data (physical and socio-economic information), hydraulic models, hydrological and groundwater models. Analysis of new projects or recent studies concerning: rainfall pattern, climatic modifications, surface water and groundwater resources, regional impacts of climate variability on desertification and biodiversity ... Identification of needs. Total: 100	Recommendations and program of action to meet further needs for the establishment of a basin-wide monitoring network. Cost to GEF: 100

<p>Activity 4.3 Support for the development of key measures (e.g. updating of rating curves of existing hydrological stations to determine low flow and flood conditions, specific water quality measurements, peizometry, pumping tests and topographic surveys) and the establishment of the hydrostratigraphy in Chad Formation in order to refine and complete the TDA</p>	<p>Hydrological measurement stations are generally abandoned or poorly reliable. Only one national project for water resources monitoring in a part of Nigeria.</p> <p>Study of the Chari-Logone groundwater resources (BMZ funded study)</p> <p>Total: 1,480</p>	<p>National and regional specialists and authorities finalise the TDA.</p> <p>Key measurements of: low-flows and flood discharges, topography and salinity of the Lake, water quality of rivers, aquifer levels, and survey of flooding dynamics and recharges. Commission specific hydrological studies on the two main rivers and on the Lake water-balance.</p> <p>Total : 2,530</p>	<p>A finalized TDA.</p> <p>A reliable scientific data base to be built at regional level during three years and lessons are learned of the actual situation in order to guide TDA, future SAP implementation, priorities and methodologies of future sub-programs.</p> <p>Cost to GEF: 1,050</p>
<p>Activity 4.4 Establish key environmental indicators in the Lake Chad Basin to verify compliance with existing and future management plans and, ultimately, to assist in evaluating SAP implementation.</p>	<p>A "Diagnostic Study of Environmental Degradation" of the old "conventional" basin (1990) and recent analysis on basin resources, current uses and constraints, environmental threats, transboundary issues and a Strategic Action Plan are available.</p> <p>A definition of key environmental indicators for the Chad Lake basin is missing.</p> <p>Total : Zero baseline</p>	<p>First definition and agreement on key environmental indicators and key physical variability and uncertainties, for the Lake Chad Basin, in relation with the objectives of existing management plans and of the Strategic Action Plan.</p> <p>Total : 50</p>	<p>First step of achieving basin monitoring capability, beginning with agreement on the definition of relevant indicators and with a common understanding of the level of countries compliance with its national and regional management plans or regulatory structures.</p> <p>Cost to GEF: 50</p>
<p>Activity 4.5 Develop risk analysis capability within the participating countries with the objective of, among other things, assessing regional-level hydro-environmental risk and identification of risk-management systems and approaches; and</p>	<p>Risk alert system is limited to a flood-alert system within Chad country.</p> <p>Total: 100</p>	<p>Regional training in risk assessment, focusing on transboundary impacts related, or transported, with water (agricultural, industrial, biological and natural risks). National inventories and assessment of risks, and of response/adaptive capabilities. Common design of risk-management systems and approaches with the objective of risk reduction.</p> <p>Total : 275</p>	<p>Regional agreement on identified main risks and on remedial actions to be jointly implemented by countries, with the support of E.A.</p> <p>Cost to GEF: 175</p>

Activity 4.6 Assemble a basin-wide synthetic framework for surface/groundwater interaction within the Lake Chad Basin to pre-identify long term consequences of development alternatives	<p>The Chari-Logone upper aquifer is being investigated by a project funded by BMZ (German Govt.) and executed by UNESCO. The Komadougou-Yobe river and upper aquifer is also studied by the "National Fadama Development Project" in Nigeria, funded by the World Bank and Federal Gvt. Of Nigeria. The Chari-Logone flood plain, and the Komadougou-Yobe river have been modelised with some assumptions concerning infiltration and topography.</p> <p>Total : 1,000</p>	<p>The active BMZ and WB projects and new GEF outputs and commitment will be used by the PMU, the participating countries and the LCBC to leverage other donors to complete selected surface water and groundwater assessment work and models within the basin.</p> <p>Total : 1,500</p>	<p>Additional work and assessment, in particular concerning sub-basin links between groundwater and surface water management, will be carried out, taking into account new needs and priorities identified by the PMU.</p> <p>Cost to GEF : 500</p>
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Output 5: Regional Program Development and Demonstration projects to test methodologies, stakeholder involvement and implementation modalities			
Cost/Benefit	BASELINE (B) (1000 US \$)	ALTERNATIVE (A) 2000-2003 (1000 US \$)	INCREMENT (A-B) (1000 US \$)
<p>Activity 5.1 Develop and begin implementation of a regional program to improve existing and define new protected areas, including the creation of corridors to link existing and new protected areas</p>	<p>Protected areas have been identified in previous diagnostics and in PDF-B. New project has been recently formulated (Parc National de Manda in Tchad).</p> <p>Total : 1,058</p>	<p>Additional outputs of this component will be focused on improved regional co-operation to enhance existing protected areas, in relation with shared waters, with new protected international corridors to be identified and discussed for implementation</p> <p>Total: 1,358</p>	<p>Agreement and formulation of a regional program for the coherent and participatory implementation of protected, cross-border corridors between protected areas. Regional and participatory contribution to the bio-diversity conservation on the basin.</p> <p>Cost to GEF: 300</p>
<p>Activity 5.2 Develop and begin implementation of a regional program, including establishment of five pilot demonstration sites, to protect immediately threatened aquatic ecosystems</p>	<p>Some projects mainly in Niger and Chad without regional co-operation to address cross-border water impacts and/or harmonisation of good practices</p> <p>Total : 748</p>	<p>In addition to the threatened Kanem dunes and Goudoumaria's oasis ponds, three other pilot demonstration sites will be implemented in Nigeria and Cameroon, with a strong emphasis on stakeholder participation and technology transfer. Joint (regional) detailed inventory, evaluation and program formulation</p> <p>Total: 1,248</p>	<p>Identify and devise tested solutions for <u>land degradation</u> and for the conservation of threatened aquatic ecosystems, in particular those of key drought sensitive ponds and lakes. Subsequent formulation of an appropriate regional program. Type: Complementary (domestic benefits but not a national priority)</p> <p>Cost to GEF: 500</p>
<p>Activity 5.3 Develop a regional program aimed at reducing growing water demand with an emphasis on identified hot-spots identified in the LCB Strategic Plan.</p>	<p>Some projects and activities mainly in Nigeria without regional co-operation to address cross-border impacts of water demand management.</p> <p>Total: 3,068</p>	<p>Develop a regional program after full assessment of the current situation (technical, economic, social, environmental) in five selected demonstration sites, with a strong emphasis on stakeholder participation.</p> <p>Total: 3568</p>	<p>Regional agreement on joint assessments of water management in five hot-spots site. Local agreement on workable alternative of water demand management. Design of an appropriate regional program involving 5 demonstration projects.</p> <p>Cost to GEF: 500</p>

<p>Activity 5.4 Support development of a regional mechanism to create and implement a regional program to anticipate future pollution threats and build capacity to prevent their occurrence</p>	<p>Limited activities, mainly in Central African Republic, without regional co-operation to address cross-border water impacts</p> <p>Total: 750</p>	<p>In co-operation with affected stakeholders (public, private, local populations, professional associations, and fishermen) implement a regional mechanism capable of discussing survey results and the design of a future regional program to prevent pollution threats.</p> <p>Total: 1000</p>	<p>First step for a concerted joint effort to prevent future pollution threats.</p> <p>Cost to GEF: 281</p>
<p>Activity 5.5 Support a regional mechanism to develop integrated basin approaches (including floodplain management) in the Kamadagou-Yobe and Chari- Logone sub-basins. Using with full stakeholder participation, design and initiate basin development and management plans, with supporting decision aid tools, to maintain the integrity of sensitivewetlands systemsdownstream and promote sustainable development.</p>	<p>Completed projects in Cameroon and in Nigeria: Waza project, and Hadejia project with limited regional co-operation to address cross-border water impacts, and without full integration of water management of dam releases, current and long-term water uses, aquifer recharges and downstream impacts on wetlands and human habitats.</p> <p>Total: 3300</p>	<p>- Support a pilot demonstration project to test the efficacy of altering current upstream regulation to provide water to sensitive wetlands downstream. -Develop two regional programs for Komadogou-Yobe and Chari Logone sub-basins, for a sub-basin integrated approach to flood plain long-term management.</p> <p>Total: 4250</p>	<p>A basin approach to flood plain management has been developed and tested , in particular to provide water to sensitive wetlands downstream</p> <p>Cost to GEF: 950</p>
<p>Activity 5.6 Feedback of demonstration results into SAP design</p>	<p>Total: Zero baseline</p>	<p>Incorporation of project results into the design of the SAP</p> <p>Total: 50</p>	<p>Cost to GEF: 50</p>

Output 6: Donor support mobilised for GEF SAP and LCBC Plan implementation. Finalisation of the TDA and regional agreement on GEF SAP			
Cost/Benefit	BASELINE (B) (US\$ 1000)	ALTERNATIVE (A) 2000-2003 (US\$ 1000)	INCREMENT (A-B) (US\$ 1000)
Activity 6.1 Development and implementation of a plan for continuing donor contact.	Total : Zero baseline	Total : 75 (Project Manager-Activity 1.1)	Cost to GEF: 75
Activity 6.2 Planning and implementation of 2 donor conferences, one shortly after GEF project approval and one immediately prior to SAP implementation.	Total : Zero baseline	In kind contribution from riparian countries Total : 90	Cost to GEF: 115
Activity 6.3 Develop and finalise the SAP through the use of Inter-ministerial Co-ordinating Committees and the LCBC	No strategic programme to address transboundary is available Total : Zero baseline	National and regional specialists and authorities finalise the SAP, through a multi-sectoral dialogue in each country. (see activity 1.4) Total : 150	A TDA and SAP in GEF format. Cost to GEF : 175
Activity 6.4 Preparation of donor conference reports and development of a strategy for ongoing project finance.	Total : Zero baseline	Total : 10	Cost to GEF: 10
TOTALS	23,662	33,262	1,080,000

ANNEX 2: LOGICAL FRAMEWORK (LOGFRAME)

Intervention Logic	Objectively Verifiable Indicators	Sources of Verification	Assumptions and Risks
Long-term Objective			
<ul style="list-style-type: none"> Develop and implement measures that ensure Lake Chad achieves sustainability through concerted, integrated management of its linked land and water resources. 	<ul style="list-style-type: none"> a co-operatively developed and approved framework and co-ordination mechanism for regional and national interventions on behalf of the participating countries. Improved national and regional capacities for the long-term sustainable development of the resources of the Lake Chad Basin. Increased donor interest in and support for the efforts of the participating countries and the LCBC to achieve a sustainable future for the Basin. Documented, substantial stakeholder participation in the work of the project. 	<ul style="list-style-type: none"> PMU documents PSC Meeting agendas and minutes Project committee and workgroup meeting agendas and minutes Terms of Reference/Work plans 	<ul style="list-style-type: none"> Continued country commitment to a regional approach. Project capacity to adequately conceptualise and implement a community based approaches for pilot demonstration projects. Key regional institutions and national governments working co-operatively. Negative changes in economic political and social conditions may detract from country commitment to a regional approach.

Output 1: Project Mechanisms: An established Program Co-ordination Unit (PMU) and nominated lead agencies to drive and co-ordinate TDA completion, pilot projects, policy initiatives and institutional linkages.

<ul style="list-style-type: none"> • Effective intra and inter project co-ordination and support. 	<ul style="list-style-type: none"> • PMU created • Co-implementation PTF created. • Country-specific Interministerial Committees (IMCs) established. • Country Lead Agencies and senior lead officials designated. • Formalised (country-endorsed) TDA and SAP. • Project plan to effectively interact with related, regional GEF IW projects. • Increased country commitment for regional level participation in project related global fora. • Increased capacity to create national benefits through enhanced transboundary management regime. (move to Output 2) 	<ul style="list-style-type: none"> • PROJECT MANAGER and other PMU staff employed/contracts issued/terms of reference defined. • PSC meeting agendas and minutes. • IMC meeting agendas and minutes. • Purchase orders/contractual agreements/ and training records • Documented increased level of governmental participation in regional fora. • Increased extent to which explicit regional positions are formed for use in various global fora. • Formalised, published TDA and SAP documents. • Formalised arrangements/agreements between and among Implementing Agencies/project regions re. Inter-project co-operation and collaboration. • Written records and reports of inter-project communications, workshops and cross-project field trips. 	<ul style="list-style-type: none"> • The PMU will facilitate the work program of the project and create necessary linkages with the LCBC, the regional entity that has been designated by the countries to act on their behalf. • The Executing Agency will move quickly to hire the PROJECT MANAGER. Delay in the hire of the PROJECT MANAGER will have a cascading effect of delays for the hire of support staff and the formulation of work plans. • The countries will be willing to quickly designate Inter-ministerial Committee members, and senior officials, who have sufficient policy-level standing to enhance prospects for timely implementation of project results. • IAs and cross-project country representatives will see it in their best interests to participate in inter-project co-ordination and co-operative activities. • Short-term national needs may outweigh increased level of participation in regional fora.
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Output 2: Strengthened Basin Governance. Enhanced regional policy initiatives and institutional mechanisms to address transboundary issues

<ul style="list-style-type: none"> Enhanced transboundary institutional mechanisms 	<ul style="list-style-type: none"> New and updated national water policies in each country that take into account transboundary water issues, encourage environmental protection and are incorporated into NAPs. Specific recommendations to effect changes in existing relevant legal frameworks to enhance prospects for an integrated regional approach to long-term, sustainable basin management. Specific, country-endorsed, and implemented proposals to create a more effective LCBC. Improved, regional agreements to improve transboundary management of power generation, irrigation, downstream riparian considerations, fisheries, water quality and effluent standards, diversions and consumptive uses, and creation of economic instruments. Country-agreed, regionally-based methodology for the conduct of environmental impact studies. 	<ul style="list-style-type: none"> Copies of updated national water policies and NAPs. Approved work plans for reviews of relevant legal frameworks. Approved workplan for review of the functions and authorities of the LCBC. Written report and recommendations for effecting changes in existing legal frameworks. Written recommendations and country-commitment to bring about a more effective LCBC. Written, country-endorsed agreements with specific mechanisms to improve the extent to which transboundary considerations, especially downstream, are taken into account in power generation, irrigation, and other water uses. Written, country-agreed methodology for the conduct of EIS. Agendas and minutes of relevant PMU and IMC meetings. Interviews at targeted sites with key, affected stakeholders 	<ul style="list-style-type: none"> Countries see the long-term benefit deriving from a regional approach to water use issues. The risk is that individual countries will give priority to those uses that accrue to the greatest domestic benefit without taking into account downstream interests. Strengthening the role of the LCBC is crucial to mitigating this danger. Countries may seek to develop alternative, bi-lateral approaches to resolving existing and future potential disputes rather than taking a broader regional approach. Again, strengthening the role of the LCBC is crucial to obviating this risk. A risk is that countries will not be willing to make national legislative or regulatory changes that are narrowly targeted to one portion of the country. This risk can be mitigated by developing regional approaches that minimize the extent to which existing country-wide legislation needs to be altered.
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Output 3: Strengthened engagement of user groups			
<ul style="list-style-type: none"> • Development of community-based mini-Agenda 21's. 	<ul style="list-style-type: none"> • Steering Committee established. • 15 pilot demonstration sites (3 in each participating country) selected. • Terms of Reference, community based implementation groups, work plans, and timetable for completion for 15 sites. • 15 final reports including recommendations for implementation and further activities in the next project phase. • Final report summarizing the overall exercise in developing mini-Agenda 21's. 	<ul style="list-style-type: none"> • Relevant agendas and meeting minutes of the PMU, 15 implementation committees, and the BCSP. • Site visits and interviews with key participants. • Documents describing the process and results of community efforts to develop mini-Agenda 21's. 	<ul style="list-style-type: none"> • As with the pilot demonstration projects, a key assumption is that there will be the necessary, close linkages between and among the PMU, LCBC, BCSP, participating countries and participating communities to effectively implement the min-Agenda 21 activity. Again, the successful involvement of community-based stakeholders during the PDF-B would indicate that this level of involvement can be accomplished. • Another key assumption is that the experience of the 15 communities will be sufficiently useful to future planning purposes that other communities will want to replicate the experience during the next project phase and beyond.

Output 4: A completed TDA and a synthetic framework for concerted management of the basin			
<ul style="list-style-type: none"> Enhanced scientific knowledge of the Lake Chad Basin. 	<ul style="list-style-type: none"> Country reports on existing, relevant data and information collected and stored within the PMU. Data and information synthesised in agreed basin framework. Gap analyses and program of action to meet further identified needs. Key environmental indicators defined. Study and results of the extent of country compliance with existing management plans completed. Report describing, evaluating and ranking regional-level hydro-environmental risks. Study and results of potential risk management systems and approaches. Basin wide synthetic framework of surface-groundwater interactions completed. Key Lake Chad Basin water-resources processes and hot-spots identified. 	<ul style="list-style-type: none"> Country reports on existing, relevant data and information. Data and information synthesis report. Copies of results of gap analyses. List of agreed upon, key environmental indicators. Reports describing extent of country compliance with management plans. Written material describing country-agreed risk-alert system. Reports describing work products associated with surface-groundwater assessments and the identification of hot-spots. Agendas and minutes of relevant PMU and IMC meetings. Additional donors leveraged to begin work on the remaining diagnostic basins 	<ul style="list-style-type: none"> The Inter-ministerial Committees are working effectively. Without effective IMC involvement quality and reliability of data will likely be inadequate. Sufficient co-operative and efficient linkages are created between and among the PMU, LCBC, the IMCs and stakeholders to develop the products described in this Output.

Output 5: Demonstration projects to test methodologies, stakeholder involvement and implementation modalities.			
<ul style="list-style-type: none"> • Formulation of regional programs, implementation arrangements and implementation of pilot projects to carry out the most urgent priority actions identified in the Strategic Action Plan. 	<ul style="list-style-type: none"> • Improved downstream protection for sensitive wetlands. • Country-approved regional program developed to define new and improve existing protected areas. • Newly established corridors connecting existing and new protected areas. • Regional program, including five pilot demonstration sites, developed to protect immediately threatened aquatic ecosystems. • Regional program, including five pilot demonstration sites, developed to create alternative livelihoods to those requiring intensive, unsustainable water use. • Anticipatory and preventative mechanisms developed by the countries to avoid future pollution related threats and problems. • Country-developed regional mechanism for flood plain management. 	<ul style="list-style-type: none"> • Agendas and meeting minutes of pertinent PMU, LCBC, IMC and Stakeholder Meetings. • Existence of regional agreement defining and agreed to implementation arrangements for the establishment of new protected areas and connecting corridors. • Documents describing the process of regional program development and the regional programs themselves. • Documents describing pilot demonstration sites, criteria for selection, stakeholder participation strategy, and pilot demonstration activities and results. • At-site interviews with community-based stakeholders at pilot demonstration sites. • Documents describing the process and results of country efforts to develop anticipatory and preventive mechanisms for pollution threats and events. • Documents describing the process and results of country efforts to develop a regionally based flood management program. • List and description of written materials publicly disseminated. 	<ul style="list-style-type: none"> • Existing, formal country endorsement of the Strategic Action Plan will translate into country commitment for joint action to implement its key recommendations. Incentive to do so is the incremental funding offered by the GEF, the leveraging capacity that is generated for the countries through the presence of the GEF, and the likelihood, given successful project implementation, of a follow-up GEF SAP implementation project. • The PMU, participating countries and the LCBC will be able to work together with communities and stakeholders in the pilot demonstration projects. This is seen as likely given the positive experience of community involvement during the PDF-B. • Perceived benefits of participation may be insufficient to attract full range of stakeholders. • Project aims may be seen as inconsistent or competing with local interests.

Output 6: Donor support mobilised for GEF SAP and LCBC Plan implementation			
<ul style="list-style-type: none"> • Hold two donor conferences and increased donor participation throughout the life of the project and beyond. 	<ul style="list-style-type: none"> • Donor conferences planned and executed. • Systematic procedure established to use the GEF project to leverage other donors for direct and indirect support to project activities. • Increased donor support for direct and indirect assistance to project related activities. 	<ul style="list-style-type: none"> • Relevant agendas and minutes of the PMU and the PSC. 	<ul style="list-style-type: none"> • A key assumption is that suitable levels of co-operation can be established and maintained between the UNDP and the WB and that the LCBC and the participating countries will be actively involved in preparation for and attendance at the donor conferences. This assumption seems well-grounded in that IA co-operation has already begun between this project and other projects in the region under the auspices of both the UNDP and the WB.

ANNEX 3: LETTERS OF ENDORSEMENT

31/12/1999 08:27 236-614790

HOTEL DU CENTRE BGI

PAGE 01

ilne / Robinson

**MINISTÈRE DE L'ENVIRONNEMENT DES
EAUX FORETS CHASSES ET PECHEs**

**RÉPUBLIQUE CENTRAFRICAINE
Unité - Dignité - Travail**

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31/12/99
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C A B I N E T

**POINT FOCAL OPERATIONNEL DU FONDS
POUR L'ENVIRONNEMENT MONDIAL**

N° 047/ MEEFCP/CAB/PFO - FEM-99

RECEIVED

DEC 31 1999

Natural Resources and Environment
Management Branch, DDSMS

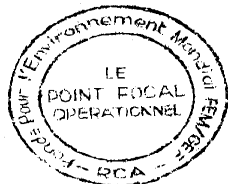
ATTESTATION D'AVAL

Je soussigné, **Gustave DOUNGOUBE**, Point FOCAL Opérationnel du Fonds pour l'Environnement Mondial (F.E.M.) de la République Centrafricaine, B.P830 Bangui, Télécopie n° (236) 61-57-41 à Bangui, République Centrafricaine, marque par la présente lettre, mon appui au "Projet d'Elaboration et de mise en œuvre d'un Programme d'action Stratégique pour l'Ecosystème du Lac Tchad, Projet inscrit dans le Programme Opérationnel n° 9 et Domaine Thématique "Eaux Internationales" du F.E.M.

La présente attestation tient lieu de lettre d'aval.

Fait à Bangui, le 30 DEC. 1999

Le Directeur Général de l'Environnement
Point Focal Opérationnel du F.E.M.



[Signature]

Gustave DOUNGOUBE

REPUBLIQUE DU CAMEROUN
 Paix-Travail-Patrie
 MINISTRE DE L'ENVIRONNEMENT
 ET DES FORETS
 SECRETARIAT PERMANENT
 A L'ENVIRONNEMENT
 DIVISION DES PROGRAMMES ET DU
 DEVELOPPEMENT DURABLE

REPUBLIC OF CAMEROON
 Peace-Work-Fatherland
 MINISTRY OF ENVIRONMENT
 AND FORESTRY
 PERMANENT SECRETARIAT
 OF THE ENVIRONMENT
 DIVISION OF PROGRAMMES AND
 SUSTAINABLE DEVELOPMENT

Yaoundé, le 30 DEC. 1999
 N° MINER/PE/DPDD/MSR

Ref. : V/L CBLT/02/145 du 20/12/99.

Le Ministre de l'Environnement et des Forêts
 The Minister of Environment and Forestry

Objet : Commission du Bassin du Lac
 Tchad (CBLT) : Endossement du Point
 Focal National FEM.

A Monsieur le Secrétaire Exécutif
 de la Commission du Bassin du Lac Tchad
 Fax : 52 41 37
 Téléx CBLT : 52 51 KD
 DJAMENA (Tchad)

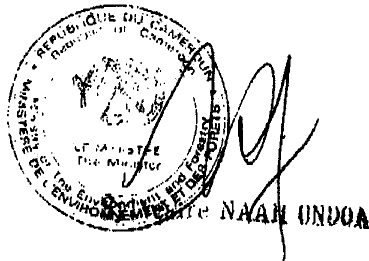
Monsieur le Secrétaire Exécutif,

J'ai l'honneur d'accuser réception de votre correspondance sus-référencée par laquelle vous sollicitez mon aval pour la soumission du budget réévalué du projet "Elaboration et Mise en Oeuvre d'un Programme d'Action Stratégique pour l'Ecosystème du Lac Tchad" au Conseil d'Administration du Fonds Mondial pour l'Environnement (FEM) prévu le 05 Janvier 2000.

Y faisant suite et en ma qualité de Point Focal du FEM au Cameroun, je vous signifie par la présente correspondance, mon accord à ce sujet.

Je vous prie de croire, Monsieur le Secrétaire Exécutif, à l'assurance de ma haute considération.

Copie : MINPAT - Yaoundé.



REPUBLIQUE DU TCHAD

MINISTERE DE L'ENVIRONNEMENT
ET DE L'EAU

DIRECTION GENERALE

POINT FOCAL OPERATIONNEL FEM.

UNITE - TRAVAIL - PROGRES

N'Djaména, le 29 Décembre 1999

N° 08 /FEM-CHD/99

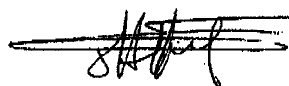
Lettre d'endossement du Point Focal National
FEM - TCHAD

Je soussigné, OUALBADET MAGOMNA, Point Focal Opérationnel pour le FEM, atteste que le projet intitulé "Elaboration et mise œuvre d'un programme d'action stratégique pour l'écosystème du Bassin du Lac Tchad" formulé par les pays membres de la Commission du Bassin du Lac Tchad (CBLT) à savoir Cameroun, Niger, Nigeria, République Centrafricaine et Tchad a été examiné par les institutions tchadiennes. J'affirme par conséquent que ce projet est jugé conforme aux domaines de la diversité biologique et de la protection des eaux internationales et des terres (Programme d'opérations intégré polyvalent relatif aux ressources en terre et en eau /Composante relative à la dégradation des terres du FEM).

Par ailleurs, je tiens à noter que la sauvegarde de la biodiversité et des eaux internationales ainsi que la protection des terres font partie des domaines prioritaires de la politique du gouvernement du Tchad (Programmes Nationaux de la Diversité Biologique et de Lutte Contre la Désertification).

Eu égard à ce qui précède, nous recommandons ce projet pour un appui financier.

OUALBADET MAGOMNA



FROM : F. M. W. R. ABUJA.

PHONE NO. : 234 09 2342370

Dec. 29 1999 11:45AM P1

Chene / Robinson

FEDERAL MINISTRY OF ENVIRONMENT

7TH & 9TH FLOOR, FEDERAL SECRETARIAT, SHEHU SHAGARI WAY
P. M. B. 468, GARKI, ABUJA.

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29/12/99
dl*

Telephone/Fax... 09-2342807, 5234932

E-mail... fepa@hyperia.com



Ref. No. **FMENV/IPA/54/VOL. T3/X**

Date **29th December, 1999**

Department of **INTERNATIONAL & PUBLIC AFFAIRS**

Dr. John Hough
Coordinator for Biodiversity and International Waters
GEF/UNDP Africa
One United Nations Plaza (DC-1-2386)
Rm. 204 E, 45th Street
New York, NY 10017
Tel: 212-906-5560
Fax: 212-906-6563
e-mail: john.hough@undp.org

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Natural Resources and Environment
Management Branch, DDS/MS

**LETTER OF ENDORSEMENT FOR DEVELOPMENT AND
IMPLEMENTATION OF A STRATEGIC ACTION PROGRAM FOR
THE LAKE CHAD BASIN ECOSYSTEM**

I am directed to refer to the revised Project Brief on the "Development and Implementation of a Strategic Action Program for the Lake Chad Basin Ecosystem" submitted on behalf of Cameroon, Central African Republic, Chad, Niger and Nigeria by the Lake Chad Basin Commission and to convey the endorsement of the Government of Nigeria.

2. Thank you for your cooperation.

Ms. Anne Ene-Ita
For: Honourable Minister

FROM : CBLT/LCBOC NIJAMENA

PHONE NO. : 235 52 41 37

Dec. 28 1999 02:10PM P1

Fax émis par : 227 735983

CABINET M. PLAN

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REPUBLIQUE DU NIGER

MINISTERE DU PLAN

SECRETARIAT GENERAL

Direction de l'Intégration
Economique Régionale

Niamey, le

27 DEC. 1999

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Natural Resources and Environment
Management Branch, DDS/13

Lettre d'endossement du Point Focal

National Du FEM/CBLT - NIGER

Je soussigné, OUMAROU ELHADJI, Secrétaire Général du Ministère du Plan, Point Focal National pour le FEM/CBLT-NIGER, agissant au nom de l'Etat Nigérien, atteste que le Projet intitulé « Elaboration et mise en œuvre d'un Programme d'Action Stratégique pour l'Ecosystème du Bassin du Lac Tchad » a l'approbation du Gouvernement.

En effet, ce projet fait partie des actions prioritaires retenues dans le cadre de la Stratégie Nationale et du Plan d'Action en matière de Protection durable du Lac Tchad par une gestion concertée et intégrée des ressources du Bassin.

Nous recommandons ce projet pour un appui financier

Secrétaire Général
Point Focal National du FEM/CBLT-NIGER

OUMAROU ELHADJI



ANNEX 4: STAP ROSTER TECHNICAL REVIEW

REVIEW OF REVISED PROPOSAL FOR LAKE CHAD - RAF 95G48

By Nii Boi Ayibotele

1. GENERAL

The Revised Proposal has addressed the concerns raised in the first review.

- a) The presentation is clearer. This has been achieved by:-
 - i) rearranging the material in the first proposal and elaborating it with additional information from the annexes. The background to the project has been made easier to appreciate by presenting the land and water resources management issues in the LCB within various contexts (viz Hydrological, Environmental, System Boundary, Socio-Economic, Policy and Institutional).
 - ii) Highlighting the transboundary issues in a way as to enhance the justification for the Project.
- b) However, the background could be further enhanced by including:-
 - i) A map of the project area somewhere between paras 1 to 4 (preferably after para 4). This is already available in one of the Annexes. It will help to focus attention on the reading.
 - ii) A table of the Socio-economic and Land cover/Land use indicators by country in para 5. This will buttress the Persistent Rural Poverty described in para 9.
 - iii) A brief description in para 13 of the institutional set ups at the local levels in the riparian countries and their performance in implementing national initiatives. This will throw light on the basic constraints that the project will eventually grapple with either at the pilot stage of Phase I or the full implementation stage of Phase II.
 - iv) The achievements and constraints of LCBC and also recent attempts to restructure it.

2. RELEVANCE AND PRIORITY

These stand high and cannot be assailed.

3. APPROACH

The approach has been made clearer by linking the project with relevant activities at national levels. (Eg. Data and information, investments in water resources infrastructures, water resources management, environmental protection) . Annex 1 provides useful information on this.

4. OBJECTIVES

The objectives in the revised proposals have been converted into outputs. These have been rearranged and rephrased, to achieve the Purpose of the project in the short and medium term.

The importance of achieving local benefits within the global benefits as the long term objective has been emphasized.

5. BACKGROUND AND JUSTIFICATION

It is evident that, relevant information available in the Annexes have been extracted and incorporated in the revised draft. This has provided additional information and strengthened the background and justification.

6. ACTIVITIES

The activities and log frame are still appropriate and valid.

7. PROJECT FINANCING

Fuller information about the project financing has also been provided in Annex 1. The contributions that on-going projects with or without donor assistance can make to the project have been indicated.

8. TIME FRAME

The inclusion of the Work Plan in Annex 2 is very useful. However:-

- i) It is doubtful whether the enhanced policies and institutions which require legislation to be passed in the parliaments of 5 countries can be accomplished in 2½ years.
- ii) Knowing what it takes to work with communities at the local level, it appears optimistic that the pilot phase can be accomplished in 2½ years. There are 15 projects, (3 in each of 5 countries) to be executed.

Hence, in view of inevitable problems and delays that will attend organising local level activities for the testing the institutional mechanisms and implementation methodologies, a 5-year rather than 4- year time frame appears more realistic. This should however not increase project cost.

9. RATIONALE FOR GEF SUPPORT

The land and water problems are regional and cover a wide area. They are also transboundary. Hence they satisfy GEF's conditionalities for assistance within its International Waters Portfolio and Land Degradation component.

ANNEX 5 RESPONSE TO STAP TECHNICAL REVIEW

The majority of the comments are supportive of the project and do not require comment here, however:

1. The reviewer suggests that the text include several maps and tables that are presently in the various annexes. Specifically: a map of the area, a table of socio-economic and land cover/land use indicators by country; a brief description of the “institutional set ups at the local levels in the riparian countries and their performance in implementing national activities”; and the achievements and constraints of LCBC and attempts to re-structure it. Due to space constraints these, together with a number of additional maps and tables, have been included in the optional annexes.
2. The reviewer concludes that “it is doubtful whether the enhanced policies and institutions which require legislation to be passed in the parliaments of 5 countries can be accomplished in 2.5 years.” He is correct. While the project brief calls for a review of existing legislation and other legal mechanisms affecting the Lake Chad Basin it does not state or imply that the requisite changes will all be in place after the 4 years of project implementation. It is important to keep in mind that this is a SAP preparation project and that the next stage, i.e. SAP implementation, is the phase during which the identified legislative changes actually occur.
3. The reviewer also states that “it appears optimistic that the pilot phase” i.e. the pilot projects “can be accomplished in the 2.5 years.” The 2.5 year time frame is tight and we recognize that implementation will be challenging. We continue to believe, however, that the 2.5 years is a manageable frame for the outputs that are envisaged.

ATTACHMENT 1: DETAILED PROJECT BUDGET (INPUT)

Budget Line	Description	Output/Activity	Exec. Agency	Total Budget (Operations)	AOS	2002-03	2003-04	2004-05	2005-06
				\$	\$	\$	\$	\$	\$
10	Personnel								
1100	Project Staff – International/Regional								
1101	Project Coordinator – 4 yrs.	ALL	UNOPS	600,000	48,000	180,000	140,000	140,000	140,000
1102	Project Financial Officer and Administrative Assistant	ALL	UNOPS	205,000	16,400	55,000	50,000	50,000	50,000
1103	Consultants/Public Participation/Community Involvement/Community Assessment	ALL	UNOPS	225,000	18,000	40,000	50,000	60,000	75,000
1104	Consultants/Update and Report on Existing Information and Data in Each Country and Regionally	A4.1	UNOPS	50,000	4,000	20,000	25,000	5,000	
1105	Consultants/Monitoring System Development	A4.2/4	UNOPS	40,000	3,200	15,000	25,000	10,000	
1106	Consultants/Update/Finalize TDA	A4.3	UNOPS	40,000	3,200	15,000	15,000	10,000	
1107	Consultants/Groundwater Expertise	A4.6	UNOPS	50,000	4,000	10,000	15,000	15,000	10,000
1108	Consultants/Hydrogeologists	A4.6	UNOPS	50,000	4,000	10,000	15,000	15,000	10,000
1109	Consultants/Modelling	A4.6	UNOPS	50,000	4,000	10,000	15,000	10,000	5,000
1110	Consultants/ GIS Development	A4.1-6	UNOPS	40,000	3,200	15,000	10,000	10,000	5,000
1111	Consultants/Land-Water Interactions-Desertification-Land Degradation	A5.1	UNOPS	30,000	2,400	5,000	10,000	10,000	5,000
1112	Consultant/Wetlands Ecology	A5.3	UNOPS	25,000	2,000	5,000	10,000	5,000	5,000
1113	Consultant/Integrated Ecosystems Management	A5.3	UNOPS	35,000	2,800	10,000	20,000	5,000	
1114	Consultants/Project M&E	M&E	UNOPS	50,000	4,000		15,000		20,000
1115	Consultants/Hydrometric	A4.6	UNOPS	50,000	4,000	10,000	20,000	20,000	10,000

1119	Socio-economic analysis (Expert Analysis)	A5.1/3	UNOPS	60,000	4,800	10,000	15,000	15,000	20,000
1199	Component subtotal			1.600M.	128,000				
1300	Administrative Support National Support Staff								
1301	PMU Secretarial Assistance	A1.1	UNOPS	80,000	6,400	15,000	15,000	20,000	15,000
1302	PMU Admin Assistance	A1.1	UNOPS	55,000	4,400	10,000	15,000	15,000	15,000
1399	Component subtotal			135,000	10,800				
1500	Monitoring and Evaluation/TPRs								
1501	Duty Travel		UNOPS	30,000	3,600		15,000		15,000
1502	UNDP/TPR		UNOPS	50,000	4,000	12,500	12,500	12,500	12,500
1503	UNDP/Mid-Term Review		UNOPS	25,000	2,000		30,000		
1504	UNDP/Final Review		UNOPS	30,000	2,400				30,000
1599	Component subtotal			135,000	10,800				
1600	Mission Cost								
1601	Mission Costs/PMU	O1	UNOPS	250,000	20,000	60,000	70,000	60,000	60,000
1602	Consultants Mission Costs/DSA (International/Regional/National)	O3/4/5	UNOPS	1,044,000	83,520	204,000	247,000	285,000	235,000
1699	Component subtotal			1.294M.	103,520				
1700	National Professional Project Personnel								
1701	National Program Coordinator/Cam.	A1.5	UNOPS	75,000	6,000	12,500	25,000	25,000	12,500
1702	National Program Coordinator/CAR	A1.5	UNOPS	75,000	6,000	12,500	25,000	25,000	12,500
1703	National Program Coordinator/Chad	A1.5	UNOPS	75,000	6,000	12,500	25,000	25,000	12,500
1704	National Program Coordinator/Niger	A1.5	UNOPS	75,000	6,000	12,500	25,000	25,000	12,500
1705	National Program Coordinator/Nigeria	A1.5	UNOPS	75,000	6,000	12,500	25,000	25,000	12,500
1706	National Program Coordinator/Sudan	A1.5	UNOPS	75,000	6,000	12,500	25,000	25,000	12,500
1707	Community Coordinators (12)	A3.2-4	UNOPS	200,000	16,000	50,000	50,000	50,000	50,000
1708	Experts/Information and Data Updates	A4.1	UNOPS	30,000	2,400	10,000	20,000		
1709	Experts/Monitoring System Development	A4.2/4	UNOPS	65,000	4,800	10,000	10,000	10,000	

1710	Experts/Update and Finalize TDA	A4.3	UNOPS	71,000	5,680	40,000	40,000	10,000	
1711	Experts/Water Resources Experts	A4.5/6	UNOPS	70,000	5,600	30,000	30,000	10,000	10,000
1712	Experts/Land Degradation	A5.1	UNOPS	60,000	4,800	5,000	15,000	15,000	10,000
1713	Experts/Wetlands Ecology	A5.3	UNOPS	55,000	4,400	10,000	10,000	10,000	5,000
1714	Experts/Integrated Ecosystems Mngmnt.	A5.3	UNOPS	30,000	2,400	10,000	10,000	10,000	5,000
1715	Natural Resources Field Personnel	O3/4/5	UNOPS	35,000	2,800	5,000	10,000	10,000	10,000
1716	Natural Resource Data Specialists	O3/4/5	UNOPS	40,000	3,200	5,000	15,000	10,000	5,000
1717	Translations/Interpretation	ALL	UNOPS	100,000	8,000	20,000	20,000	30,000	30,000
1799	Component subtotal			1.206M.	96,480				
19	Component Total			4.370M					
30	Training/Fellowship/Meetings								
3201	Steering Committee, PSC	A1.3	UNOPS	70,000	5,600	15,000	15,000	15,000	15,000
3202	Inter-Ministerial Meetings/Cam..	A1.4	UNOPS	35,000	2,800	10,000	10,000	10,000	5,000
3203	Inter-Ministerial Meetings/CAR	A1.4	UNOPS	35,000	2,800	10,000	10,000	10,000	5,000
3204	Inter-Ministerial Meetings/Chad	A1.4	UNOPS	35,000	2,800	10,000	10,000	10,000	5,000
3205	Inter-Ministerial Meetings/Niger	A1.4	UNOPS	35,000	2,800	10,000	10,000	10,000	5,000
3206	Inter-Ministerial Meetings/Nigeria	A1.4	UNOPS	35,000	2,800	10,000	10,000	10,000	5,000
3207	Inter-Ministerial Meetings/Sudan	A1.4	UNOPS	35,000	2,800	10,000	10,000	10,000	5,000
3208	Training/LCBC Staff	ALL	UNOPS	50,000	4,000	10,000	15,000	15,000	10,000
3209	Training/Country Personnel in GIS, Modelling, and Other Relevant Skills	O4	UNOPS	75,000	6,000				
3209	Training/Country and Local Personnel Related to Pilot Demonstration Activities	O5	UNOPS	50,000	4,000	5,000	10,000	20,000	15,000
3209	Meetings for Local Planning Initiatives	O.3	UNOPS	100,000	8,000	15,000	25,000	35,000	25,000
3210	2 Regional Workshops/TDA Development	A4.3	UNOPS	50,000	4,000	25,000		25,000	
3211	5 Country Workshops/TDA Development	A4.3	UNOPS	70,000	5,600	25,000	25,000	20,000	
3212	4 Expert Workshops to Assess Progress on Output 4 and Related Activities	O4	UNOPS	80,000	6,400	20,000	20,000	40,000	
3213	Meetings on Public Participation/Community Involvement/Community Assessment	ALL	UNOPS	105,000	8,400	20,000	50,000	25,000	10,000

3299	Component subtotal			927,500	74,200				
39	Component Total			927,500					
40	Equipment								
4501	Office Operation and Maintenance	O1	UNOPS	250,000	20,000	55,000	60,000	65,000	70,000
4502	Computing Equipment/Hardware-Software	O1	UNOPS	125,000	10,000	75,000	40,000	10,000	
4503	Imagery and GIS product production	O4/5	UNOPS	120,000	9,600	50,000	25,000		
4504	Project Vehicles	ALL	UNOPS	115,000	9,200	50,000			
4505	Field Communication equipment	ALL	UNOPS	75,000	6,000	60,000	15,000		
4506	Piezometers and Piezometer Construction	A4.3	UNOPS	350,000	28,000	100,000	250,000		
4507	Hydrometric Monitoring equipment	O4/5	UNOPS	100,000	8,000	100,000	100,000		
4599	Component subtotal			1.135M	90,800				
49	Component Total			1.135M					
52	Reports								
5201	Printing and Publication of interim reports	O1	UNOPS	30,000	2,400	5,000	7,000	7,000	11,000
5202	Printing and Publication/TDA Materials	O1	UNOPS	25,000	2,000	5,000	10,000	5,000	5,000
5205	Miscellaneous reporting	O1	UNOPS	7,500	600		2,000	2,000	3,500
5206	Project Audits	O1	UNOPS	20,000	1,600	10,000			10,000
5299	Component subtotal			82,500	6,600				
59	Component Total			82,500					
90	Project Total (operational)			6,515,000					
	Project Support Cost (8%) (Total AOS)³				521,000				
100	GRAND TOTAL			7,036,000					

³ AOS rounded to 521,000 from 521,200.

ATTACHMENT 2: PROJECT TIMETABLE																
Project Component / Activity	Year 1				Year 2				Year 3				Year 4			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Output 1: Project mechanisms for TDA and SAP																
Recruit project personnel																
Establish the PMU																
Establish the Co-implementation PTF																
Establish Inter-ministerial Committees																
Support country Lead Agencies																
Output 2 Enhanced Policies and Institutions																
Review LCBC																
Identify actors																
National Development Plans																
Legal Frameworks																
Structural arrangements																
Linkage methodology																
Output 3: Engagement of stakeholders																
Steering Committees																
Undertake Consultations																
Hold workshops																
Prepare recommendations																
Regional methodology																
Output 4: TDA and Synthetic Framework																
Compile data																
Gap analysis																
Key measures and finalise TDA							*									
Environmental indicators																
Risk analysis and assessment																
Synthetic framework																
Output 5: Demonstrations																
Pre-identification (WB PDF-B) and Identification	++	++	++	++												
Protected areas																
Threatened aquatic ecosystems																
Demand management																
Mitigation of pollution threats																
Sub-basins																
Demonstration feedback																
Output 6: GEF SAP and Donor support																
Donor contact																
Donor conferences			*													
SAP Development through ICCs															*	
SAP finance plan																

ATTACHMENT 3

Institutional Arrangements

Preface

It should be noted that the GEF project described in this project document is a pre-SAP implementation project which will emphasize completion of a TDA, the development of a five country, Lake Chad Basin-wide Strategic Action program the implementation of which will be the subject of a follow-on GEF project with substantial, additional country and donor co-finance. Since submission and approval of the Project Brief Sudan has decided to become a member of the LCBC. Thus a challenge for the project will be to successfully integrate Sudan into the work of the project, particularly in the development of the full TDA and the SAP. A major outcome of this project will be to build country and regional capacity, the latter largely through capacity building initiatives for the Lake Chad Basin Commission, undertaken during this first project. It is intended that during this initial project the LCBC will work closely with the Executing Agency (UNOPS) and simultaneously assume distinct execution responsibility for certain project activities. A specific execution responsibility of the LCBC will be activities associated with the pilot demonstration activities that are described in a separate Annex to this document

Implementing Agencies

The UNDP and the World Bank will be the GEF Implementing Agencies for this project. The UNDP and World Bank are two of the formally designated GEF Implementing Agencies and are accountable to the GEF for all aspects of project implementation. The Implementing Agencies of the Project will work through the Steering Committee and through their respective Monitoring and Evaluation procedures to meet their obligations to the GEF and their respective internal requirements. The UNDP and World Bank will endeavor to coordinate their respective GEF and Agency requirements, particularly in the area of Monitoring and Evaluation, to maximize project resource efficiencies.

Executing Agency

The Executing Agency for the project will be the United Nations Office for Project Services (UNOPS). UNOPS has the comparative advantage of experience in the successful management of UNDP-GEF International Waters projects. Specifically, UNOPS has the comparative advantage of being experienced in ensuring that personnel are well-positioned to offer to the Project Management Unit the expert services that it will require to ensure adherence to standard UNDP practice with regard to, among other things, the hiring of personnel, the transport of personnel to duty stations, recruitment processes, contracting, equipment purchase and disposition rules and regulations, and the coordination of monitoring and evaluation functions. The UNOPS itself is a project management entity, and as such does not involve itself in the execution of substantive project activities. Thus the UNOPS will work through the Steering Committee to involve other executing partners for specific project activities based on their comparative advantage. A major objective of this project is to build capacity within the LCBC. The LCBC will be involved in certain specific elements of project execution, with regard to, among other elements, the pilot demonstration activities described in this project document. The exact modalities of LCBC's project execution role will be determined during the early stages of full project implementation and will be the subject of a Memorandum of Agreement between the UNOPS and the LCBC.

Project Steering Committee

The Project Steering Committee will be comprised of a representatives of the two GEF Implementing Agencies, one member from the Executing Agency, one member designated from each of the participating countries, and two representatives of the LCBC. The Executive Secretary of the LCBC shall Chair the PSC. The Project Manager of the Project shall serve as an ex-officio member of the PSC. Other members may be added to the PSC at the discretion of the PSC at any time. The more precise

functions of the PSC are to be found in the Terms of Reference which follow this Annex.

Project Management Unit

The Project Management Unit, or PMU, will provide a coordination and management structure for the development and implementation of the UNDP-GEF Lake Chad Basin project in accordance with the rules and procedures of GEF/UNDP and based on the general guidance provided by the Project Steering Committee (PSC). The PMU will be comprised of the Project Manager, the Director of Finance and Administration, and other members of the PMU as will be determined by the Project Manager.

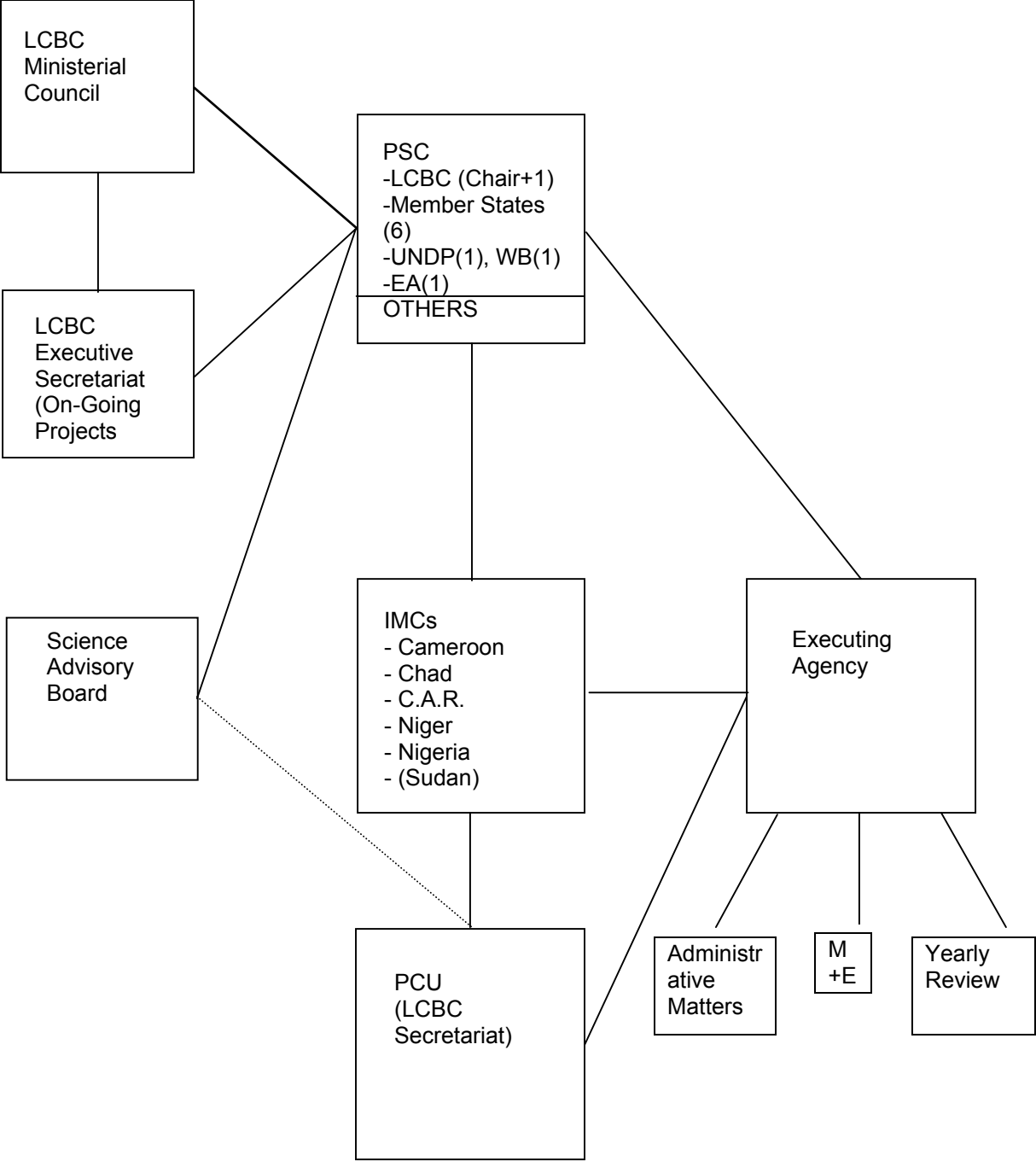
The Project Manager shall be responsible for the overall coordination of all aspects of the Project in general and in particular. He/she shall liaise directly with designated officials of the Participating Countries, the Implementing Agencies, the Executing Agency, UNDP Country Offices, World Bank Country Offices, existing and potential additional project donors, National Focal Points, and others as deemed appropriate and necessary by the PSC or by the Project Manager him/her self. The budget and associated work plan will provide guidance on the day-to-day implementation of the approved Project Document and on the integration of the various donor funded parallel initiatives. He/she shall be responsible for delivery of all substantive, managerial and financial reports from and on behalf of the Project. He/she will provide overall supervision for all GEF staff in the Project Management Unit.

Inter-Ministerial Coordinating Committees

Each of the Participating Countries shall convene an Inter-Ministerial Coordinating Committee (IMCC). The LCBC will assist the countries in this activity. Each IMCC will function to coordinate country level activities necessary to the formulation of the Transboundary Diagnostic Analysis (TDA) and the Strategic Action Program (SAP). As part of country specific TDA activities each country will formulate and prioritize its project related, country specific activities on a sector by sector basis. Further, working with and through the Project TDA formulation process, they will determine, in priority sequence, the transboundary issues that confront the Lake Chad Basin as a whole. Each Participating Country shall, with the assistance of the LCBC, name a Lead Country Official who will Chair the IMCC. Provision has been made for staff assistance to each of the designated Country Chairs. Limited financial provision has also been made for meetings of each country IMCC.

Following is an organogram depicting the relationships between and among the various project institutions:

Attachment 4 BASIC ORGANOGRAM FOR GEF/LCBC PROJECT



ATTACHMENT 5

Monitoring and Evaluation Details

As a result of the emphasis placed on results-based management, it has become mandatory for all GEF projects to develop a detailed Monitoring & Evaluation workplan at the inception of the activities. For purposes of this project, the monitoring and evaluation overall plan will begin with the development of IW critical indicators as described in this project document. One of the responsibilities of the PROJECT MANAGER will be to update the M&E workplan which will allow for a critical assessment of project performance by showing the schedule of the activities, their cost and the expected outputs and achievements according to the established benchmarks and milestones. The workplan will be the main tool for monitoring and evaluating the progress of the project.

This document generally, and more specifically the logframe in this document and logframe being developed for the WB components, will be used to identify relevant Process Indicators, Stress Reduction Indicators, and Environmental Status Indicators that will serve to inform the M&E process and be adopted by the participating countries. These three indicators will be more explicitly identified and incorporated into the project as project outputs after year one of the project, and completion of the negotiations necessary to form the BCC would be a Process Indicator at the end of the project. Another especially important Process Indicator will be the updated SAP that will be created by the end of year four of the project. The project logframe has been specifically designed in a way that lends itself to the straightforward identification of Process, Stress Reduction, and Environmental Status Indicators.

During year one of the project, the PMU will identify the relevant Process Indicators (PIs), Stress Reduction Indicators (SRIs) and Environmental Status Indicators (ESIs) relevant to the project. These indicators will be reviewed as part of the initial monitoring and evaluation exercise and upon their adoption will become a basis for the ongoing monitoring and evaluation process. The Logframe Analysis incorporated into the Project Brief and the respective logframes of the IAs shall be used in significant measure to assist in the identification of the relevant indicators. It is expected that as with many other GEF IW projects, many of the indicators to be employed during the life of the project will be PIs. These would include, *inter alia*, such indicators as the establishment and successful functioning of the PMU and the creation and functioning of the Interministerial Committees envisaged in the project. SRIs might include, *inter alia*, revised legislation and other national and regional changes in or additions to regulations and practices, economic and social benefits for the participating countries, harmonized and implemented common approaches to land degradation issues, and specific improvements in the capacity of the LCBA to effectively address regional issues related to the work of this project. While ESIs are likely to become more apparent after the life of the GEF project, there are likely to be some ESIs that are likely to be realized during implementation. These ESIs would include, *inter alia*, the successful completion of the pilot demonstration activities.

In addition to the monitoring and evaluation described above, monitoring of the project will be undertaken by a contracted supervision firm, and by a balanced group of experts selected by the IAs. The extensive experience by the IAs in monitoring large programs will be drawn upon to ensure that the project activities are carefully documented. There will be two evaluation periods, one at mid-term and another at the end of the Program.

The mid-point review will focus on relevance, performance (effectiveness, efficiency and timeliness), issues requiring decisions and actions and initial lessons learned about project design, implementation and management. The final evaluation will focus on similar issues as the mid-term evaluation but will also look at early signs of potential impact and sustainability of results, including the contribution to capacity development and the achievement of global environmental goals. Recommendations on follow-up activities will also be provided.

Approximately US\$200,000 is allocated for the monitoring and evaluation (M&E) and Tri-partite Reviews (TPRs) which will be undertaken by independent experts and the IAs. This figure will be the subject of ongoing review and budgetary adjustments will be made as necessary. An additional US\$45,000 (UNDP and WB) is committed to project audits. The evaluation process will be carried out according to standard procedures and formats in line with GEF requirements. The process will include the collection and analysis of data on the Project and its various Outputs and Activities including an overall assessment, the achievement of clearly defined objectives and performance with verifiable indicators, annual reviews, and description and analysis of stakeholder participation in the Project design and implementation. Explanations will be given on how the monitoring and evaluation results will be used to adjust the implementation of the Project if required and to replicate results throughout the region and globally. As far as possible, the M&E process will be measured according to a detailed workplan and a Logical Framework Analysis approach developed and tabulated in the respective project documents of the IAs.

While distinct, Monitoring and Evaluation are yet “interactive and mutually supportive” activities:

Monitoring is a continuous process of collecting and analyzing information to measure the progress of a project toward expected results. Monitoring provides managers and participants with regular feedback that can help determine whether a project is progressing as planned.

Evaluations are periodic assessments of project performance and impact. Evaluations also document what lessons are being learned from experience.

Generally, individuals involved in managing a project are charged with monitoring. By contrast, individuals independent of project operations conduct evaluations.

Reporting is the systematic and timely provision of essential information. It is an integral part of the monitoring and evaluation function.

Monitoring, reporting and evaluation are management functions which could also be described as observing project progress (monitoring), documenting the observed information (reporting) and assessing on the basis of the above (evaluating).

Monitoring and systematic reporting must be undertaken for all regular and medium-size projects regardless of duration and budget. A chart describing standard M&E practices, timing of activities, and responsibilities for those activities follows.

STANDARD M&E ACTIVITIES, TIMEFRAMES, AND RESPONSIBILITIES⁴

ACTIVITY	RESPONSIBILITIES	TIMEFRAMES
1. Drafting Project Planning Documents: Prodoc, Logframe (including indicators)	Project proponent , together with UNDP/GEF staff, project development specialists and other stakeholders	During project design stage
2. M&E Plan	Project Proponent , together with UNDP/GEF staff, project development specialists and other stakeholders	During project design stage
3. Inception Report	Project Implementation Team	At the beginning of project implementation
4. Work Plan	Project Implementation Team	Annually
5. Annual Programme/ Project Report (APR)	The Governments, UNDP Country Office , Executing Agency, Project Team, UNDP/GEF Task Manager ⁵ , and Target Groups	Annually
6. Tripartite Review (TPR)	The Governments, UNDP Country Office , Executing Agency, Project Team, UNDP/GEF Task Manager, and Target Groups	Annually
7. Tripartite Review Report	UNDP Country Office	Annually, immediately following TPR
8. Project Implementation Review (PIR)	UNDP Country Office , UNDP/GEF headquarters, Project Team, GEF's M&E team, UNDP/GEF Task Manager	Annually, between June and September
9. Mid-term, Final and Ex-post evaluations	Project team, UNDP/GEF headquarters , UNDP/GEF Task Manager, UNDP Country Office	At the mid-point and end of project implementation; Ex-post, about two years after project completion
10. Terminal Report	UNDP Country Office , UNDP/GEF Task Manager, Project Team	At least one month before the end of the project
11. Audit	Executing Agency , UNDP Country Office, Project Team	At least once in the life of the project (see section on audit)

¹The unit in bold has the lead responsibility.

Attachment 6

Reporting Requirements

and

Legal Context

Ongoing project reporting will be provided in accordance with established UNDP procedures and will be provided by the UNDP Country Office with support from UNDP- GEF. Overall supervision of the Project will be the responsibility of the Project Manager.

Reporting

The Project support Unit will be responsible for the preparation and submission of the following reports:

(a) Inception Report (IR)

The inception report is to be prepared by the Project Manager with the assistance of the project experts as relevant. The IR will be prepared no later than three months after project start-up and will include a detailed Workplan and Budget for the duration of the project, progress to date on project establishment and start-up activities and any proposed amendments to project activities or approaches. The report will be circulated to all the parties who will be given a period of one calendar month in which to respond with comments or queries. The report will also be reviewed by UNDP - GEF to ensure consistency with the objectives and activities indicated in the Project Document.

(b) Annual Programme/Project Report (APR)

The Annual Project Report (APR) is designed to obtain the independent views of the main stakeholders of a project on its relevance, performance and the likelihood of its success. The APR aims to: a) provide a rating and textual assessment of the progress of a project in achieving its objectives; b) present stakeholders' insights into issues affecting the implementation of a project and their proposals for addressing those issues; and c) serve as a source of inputs to the Tripartite Review (TPR). The main project stakeholders participate in the preparation of the APR.

The APRs will be prepared every six months during the first year of the project, and then annually. The APRs will detail activities undertaken since the last APR, milestones reached, key results and achievements, problems encountered and any other issues that need to be highlighted.

(c) Periodic Status Reports

As and when called for by the Project Manager, the government or UNDP, the Project Manager will prepare Status Reports, focusing on specific issues or areas of activity as stipulated by the querant. The request for a Status Report will be in written form, and will clearly state the issue or activities which need to be reported on. These reports can be used as a form of specific oversight in key areas, or as troubleshooting exercises to evaluate and overcome obstacles and difficulties encountered. The parties are requested to minimise their requests for Status Reports, and when such are necessary will allow reasonable timeframes for the preparation of these Reports.

(d) Technical Reports

Technical Reports are detailed documents covering specific areas of analysis or scientific specialisations within the overall project. As part of the Inception Report the Project Manager will prepare a draft Reports List, detailing the technical reports that are expected to be prepared on key areas of activity during the course of the Project, and tentative due dates. Where necessary this Reports List will be revised and updated, and included in subsequent APRs. Technical Reports may also be prepared by external consultants as Final Reports for their technical inputs, and should be comprehensive, specialised analyses of clearly-defined areas of

research within the framework of the project and its sites.

(e) *Project Publications*

Project Publications will form a key method of crystallising and disseminating the results and achievements of the Project. These publications will be scientific or informational texts on the activities and achievements of the Project, in the form of books, journal articles or multimedia publications. These Publications can be based on Technical Reports, depending upon the relevance, scientific worth, etc. of these Reports, or may be summaries or compilations of a series of Technical Reports and other research. The Project Manager will determine if specific Technical Reports merit formal publication, and will also (in consultation with the government and other parties and with the help of external specialists and staff where necessary) plan and produce these Publications in a consistent and recognisable format and identity. These Publications will form the most visible public output of the Project, and as such should be prepared and presented to the highest scientific and technical standards.

(f) *Project Terminal Report*

During the last three months of the project the Project Manager will prepare the Project Terminal Report. This comprehensive report will summarise all activities, achievements and outputs of the Project, lessons learnt, objectives met and missed, structures and systems implemented, etc. and will be the definitive statement of the Project's activities over the five-year duration. It will also lay out recommendations for any further steps that may need to be taken to ensure sustainability and replicability of the Project's activities.

(g) *Other Publications and Publicity Activities*

In order to ensure international dissemination of project results, **a high-quality publication of results** will be prepared, based upon the Project Terminal Report and previous Project Publications. Finally, it will be useful to hold at least one *international workshop* at which policy makers in neighbouring countries can be made aware of the country's progress in achieving the project's goals.

Tripartite Review (TPR)

The tripartite review (TPR) is the highest policy-level meeting of the parties directly involved in the implementation of a project. The project will be subject to Tripartite Review (TPR) at least once every twelve months by representatives of the Government, the executing agency and UNDP, and the first such meeting to be held within the first twelve months of the start of full implementation. The Project Support Unit shall prepare an Annual Project Report (APR) and to submit to UNDP. The APR must be ready two weeks prior to the TPR.

The APR will be used as one of the basic documents for discussions in the TPR meeting. The National Project Manager presents the APR to the TPR, highlighting policy issues and recommendations for the decision of the TPR participants. The NPD/CTA also informs the participants of any agreement reached by stakeholders during the APR preparation on how to resolve operational issues. Six-monthly APR's will be provided during the first two years of the project to ensure that design and inception activities are closely monitored, and subsequently the APR will be done on an annual basis. Separate reviews of each state component may also be conducted if necessary. Monitoring and Evaluation Indicators will be built into the project in consultation with UNDP.

Terminal Tripartite Review (TTR)

The terminal tripartite review is held in the last month of project operations. The Project Management Unit is responsible in preparing the Terminal Report, and to submit to UNDP. It shall be prepared in draft

sufficiently in advance to allow review and technical clearance by the executing agency at least two months prior to the terminal tripartite review. The Terminal Report will serve as the basis for discussions in the TPR. The terminal tripartite review considers the implementation of the project as a whole, paying particular attention to whether the project has achieved its immediate objectives and contributed to the broader environmental objective, and decides whether any actions are still necessary.

Project Implementation Review (PIR)

A major tool for monitoring the GEF portfolio and extracting lessons is the annual GEF Project Implementation Review (PIR). The PIR has become an essential management and monitoring tool for project managers and offers the main vehicle for extracting lessons from ongoing projects.

The PIR is mandatory for all GEF projects that have been under implementation for at least one year at the time that the exercise is conducted. A project becomes legal and implementation activities can begin when all parties have signed the project document. The PIR questionnaire is sent to the UNDP country office, usually around the beginning of June. It is the responsibility of the Project Manager to complete the PIR questionnaire, with the oversight of the UNDP Country Office.

Mid-term Evaluation

An independent Mid-Term Evaluation will be undertaken at the end of the second year. The Mid-Term Evaluation will focus on the effectiveness, efficiency and timeliness of project implementation; will highlight issues requiring decisions and actions; and will present initial lessons learned about project design, implementation and management. Findings of this review will be incorporated as recommendations for enhanced implementation during the final half of the project's term. The organisation, terms of reference and timing of the mid-term evaluation will be decided after consultation between the parties to the project document.

Final Evaluation

An independent Final Evaluation will take place three months prior to the terminal tripartite review meeting, and will focus on the same issues as the mid-term evaluation. The final evaluation will also look at early signs of potential impact and sustainability of results, including the contribution to capacity development and the achievement of global environmental goals. The Final Evaluation should also provide recommendations for follow-up activities. The organisation, terms of reference and timing of the final evaluation will be decided after consultation between the parties to the project document.

Regular Monitoring and Evaluation

The project will also be closely monitored by the UNDP Country Office through quarterly meetings or more frequently as deemed necessary with the Project Manager. This will allow to take stock and to trouble shoot of any problems pertaining to the project quickly to ensure smooth implementation of project activities.

Section I: Legal Context

This Project Document shall be the instrument envisaged in the Supplemental Provisions to the Project Document. The host-country implementing agency shall for the purpose of the Supplemental Provisions to the Project Document, refer to the co-operating agency described in the Supplemental Provisions.

All activities stipulated in the Project Document shall be implemented accordingly. However, should there be a need to make changes/modifications to any of the agreed activities, all signatories of the Project Document must concur, before such changes are made.

The following amendments may be made to the original Project Document, even if they are signed only by the UNDP Resident Representative, provided the latter assumes that all other signatories of the Project Document have no objections to the amendments:

- Revisions in, or additions to, any of the Annexes of the Project Document with the exception of the Standard Legal Text for non-SBAA countries which may not be altered and the agreement to which is a pre-condition for UNDP assistance.
- Revisions which do not result in a major changes in the project's immediate objectives or outputs, and which are attributable to a reordering of the activities or inputs in order to improve the realisation of the objectives or the outputs.
- Necessary yearly revisions which are made to reorganise the provision of already scheduled inputs, to reflect an increase in the cost of expert services or other services due to inflation.

The executing agent designated on the cover page to this project document has been duly delegated by UNDP and the government coordinating authority to carry out this project and accordingly will follow UNDP and UNOPS accounting, financial reporting and auditing procedures set forth in the following documents as may be amended by UNDP from time to time.

- The Accounting and financial reporting procedures set out in UNDP Programming Manual and UNOPS Handbook
- The UNDP Audit Requirements set out in the UNDP Programming Manual.

The above documents are an integral part of this project document although incorporated herein only by reference. They have already been provided to the government and said executing agent.

Auditors to the project will be officially designated. Such auditors, and/or other officially appointed auditors shall undertake periodic management and financial audits of the project in accordance with UNDP auditing procedures.

In addition, all accounts maintained by UNOPS for UNDP resources may be audited by the UNDP internal Auditors and/or the United Nations Board of Auditors or by public accountants designated by the United Nations Board of Auditors.

ATTACHMENT 7

Project Terms of Reference

Terms of Reference Project Manager

Duration:	4 Year Fixed Term
Date required:	1 July 2002 (Estimated)
Duty station:	N'djamena, Chad with travel within the Project region (CAR, Chad, Niger, Nigeria, Sudan) as required. Some international travel outside the region will also be required.

Project Purpose:

The long-term objective of the GEF project is to achieve global environmental benefits through concerted management of the naturally integrated land and water resources of the Lake Chad Basin. The specific purpose of the project is to overcome barriers to the concerted management of the basin through well-orchestrated and enhanced collaboration and capacity building among riparians and stakeholders. Transboundary issues have already been identified and agreed by five member States of the Lake Chad Basin Commission (LCBC) in the regional LCB Strategic Plan. Stage I of GEF support will therefore involve completion of a Transboundary Diagnostic Analysis (TDA) and lead to the formulation of a GEF supported Strategic Action Programme (SAP). The SAP will include necessary baseline and additional actions to address the priority transboundary issues and provide an essential monitoring and evaluation tool for implementation. Stage I will require the development and testing of set of institutional mechanisms and implementation methodologies that explicitly link regional, national and local initiatives in land and water management. Additionally, it will involve preparation of a basin-wide synthetic framework in which transboundary priorities can be addressed and project interventions monitored. Stage II of GEF will support full-scale implementation of the GEF SAP. The project provides for a process of formal endorsement of the GEF SAP by the participating governments, support to the translation of SAP provisions into national policy and legislation, and the mobilisation of institutional and investment resources for its implementation.

General Responsibilities:

The Project Manager shall be responsible for the overall coordination of all aspects of the Project in general and in particular. He/she shall liaise directly with designated officials of the Participating Countries, the Lake Chad Basin Committee, the Implementing Agencies, the Executing Agency, UNDP and World Bank Country Offices, existing and potential additional project donors, National Focal Points, and others as deemed appropriate and necessary by the PSC or by the Project Manager him/her self. The budget and associated work plan will provide guidance on the day-to-day implementation of the approved Project Document and on the integration of the various donor funded parallel initiatives. He/she shall be responsible for delivery of all substantive, managerial and financial reports from and on behalf of the Project. He/she will provide overall supervision for all GEF staff in the Project Management Unit.

Specific Duties

The Project Manager will have the following specific duties:

- Be responsible for the effective management of the PMU, its staff, budget and imprest fund;
- Prepare an Annual Work Plan of the program on the basis of the Project Document, under the general supervision of the Project Steering Committee and in close consultation and coordination with National Focal Points, GEF Partners and relevant donors;
- Coordinate, monitor and be responsible to the PSC for implementation of the work plan;
- Ensure consistency between the various program elements and related activities provided or

- funded by other donor organizations;
- Prepare and oversee the development of Terms of Reference for consultants and contractors;
- Coordinate and oversee preparation of the substantive and operational reports from the Program;
- Foster and establish links with other related GEF programs and, where appropriate, with other relevant regional International Waters programs;
- Be an ex-officio member of the PSC and be responsible for the preparation, organization, and follow-up necessary to the effective conduct of PSC business; and
- Submit quarterly reports of relevant project progress and problems to the PSC.

Qualifications:

- Post-graduate degree (preferably a Ph.D.) in Water Resources, Environmental Management, or other professional area directly related to the work of the Project;
- Extensive experience in fields related to the assignment. At least ten years experience as a senior Project Manager;
- Demonstrated and considerable diplomatic and negotiating skills;
- familiarity with the goals and procedures of international organizations preferred, in particular those of the GEF and its partners (UNDP, the World Bank, the African Development Bank, and current and future potential additional donors);
- excellent English speaking and writing skills;
- existing French speaking and reading capability;
- previous work experience in one or more of the participating countries preferred, and previous work experience in the region on issues related to the project favorably considered;
- ability and willingness to travel extensively; and
- demonstrable skills in information technology.

Terms of Reference
Director of Finance and Administration

Duration: 4 Year Fixed Term

Date Required: 1 July, 2002 (Estimated)

Location: N'djamena, Chad

Background: The PMU will provide a coordination and management structure for the development and implementation of the UNDP/WB GEF Project in accordance with the rules and procedures of the GEF/UNDP, as executed through the UNOPS, and based on the general guidance provided by the Project Steering Committee (PSC). The PMU is comprised of the Project Manager, Director of Finance and Administration, Public Participation and Communications expertise, requisite administrative and secretarial personnel, and other contractors/consultant personnel as necessary.

Tasks:

Under the supervision of the Project Manager, the Director of Finance and Administration will manage the day to day operations of the PMU, particularly with respect to finances and accounting. His/her responsibility area will cover provision of technical services, procurement (including importation, permits, etc.), personnel matters (in close cooperation with the counterpart staff of UNOPS and the UNDP and WB Country Office) and record keeping (including computer-based records). The post holder will be responsible for liaising as appropriate with the LCBC and the IAs and will, as delegated by the Project Manager, supervise the work of other PMU support staff. More specifically the Director of Finance and Administration shall:

- Provide assistance to the Project Manager, as directed by the Project Manager, in organizing, co-ordinating, directing and supervising specified activities under the project;

Finance

- Manage the Project Impress account; carry out functions of Certifying Officer for the Impress Account;
- Be responsible for monthly imprest reports and obligation control status reports to UNOPS;
- Review, analyze, monitor and report expenditure against approved budgets and/or authorized expenditures;
- Provide advice and guidance on financial, budgetary, and administrative matters and prepare budget revisions as and when necessary;
- Prepare cash flow forecasts in consultation with the Project Manager;
- Prepare monthly bank reconciliation statements for all Project accounts;
- Prepare quarterly and annual financial statements for the Project;
- Liaise with the UNDP and World Bank external auditors as necessary and assist in responding to audit inquiries and financial management letters;
- Monitoring performance against agreed financial performance indicators; and
- Preparing financial withdrawal applications and related disbursement schedules.

Program

- Provide assistance to the Project Manager in development of annual Work Plan for the

Project;

- Prepare Terms of Reference and contracts for international and national consultants, subcontractors and support staff, and evaluate performance;
- Plan and implement project investments of procurement/monitoring equipment in liaison with the ICPDR and its Expert Groups;
- Support the Project Manager to liaise with the LCBC and other entities as may be required for the successful implementation of Project activities;
- Cooperate with UN agencies, NGO's and Donors on implementation of Program activities;
- Develop as necessary programs and concepts for meeting, workshops and training courses;
- Organize and supervise, as necessary, the implementation of workshops and meetings and support other organization activities;

Qualifications

- A Bachelor's Degree in business administration or a related field, or equivalent, demonstrated experience in financial management of projects;
- knowledge of financial regulations and procedures of the UN System and budget keeping for an international project is essential and in particular experience in UNDP/GEF and UNOPS financial procedures will be highly favorably considered;
- good organizational, interpersonal and communication skills;
- familiar with and, ideally, possessing work experience in the Lake Chad Basin countries and with donors and NGOs;
- computer proficiency and knowledge of Visual Imprest, MS Office and Internet applications;
- Fluency in French required and fluency in, and ability to communicate in writing in English very favorably considered;

Terms of Reference Project Coordination Unit

Duration: 4 Years

Location: N'djamena, Chad

Background: The PMU will provide a coordination and management structure for the development and implementation of the UNDP/WB-GEF Project in accordance with the rules and procedures of GEF/UNDP, as executed through the UNOPS, and based on the general guidance provided by the Project Steering Committee (PSC). The PMU is comprised of the Project Manager, Director of Finance and Administration, Public Participation and Communications expertise, requisite secretarial and administrative services, and other contract/consultant personnel as necessary.

Tasks:

- Assure effective and efficient Program Management (substantive, financial, logistical and strategic).
- Facilitate networking between and among project entities, national officials (Cameroon, CAR, Chad, Niger, Nigeria, Sudan), Implementing Agency personnel, cooperating partners such as UNDP and WB Country Offices, National Focal Points, existing and potential co-financers, other related GEF projects, and others as appropriate and necessary;
- Organize technical cooperation activities between and among related projects participating;
- Organize project related consultative meetings for introducing and implementing program activities (including arrangements for such necessities as simultaneous translation and the production of documents in English and Portuguese);
- Collect and disseminate information on policy, economic, scientific and technical issues related to the Project;
- Prepare progress reports (administrative and financial) concerning Project activities;
- Prepare and arrange the logistics necessary to Implementing Agency and other GEF related Monitoring and Evaluation Meetings;
- Establish and assist in networking between specialized institutions in participating countries and technical specialists from elsewhere;

Terms of Reference Project Steering Committee (PSC)

Duration: Four Years

Background:

The Project will have a Project Steering Committee comprised of one representative from each of the GEF Implementing Agencies, one member from each of the Participating Countries, two members from the Lake Chad Basin Commission, one member from the Executing Agency (UNOPS), and other members as may be deemed necessary by the PSC itself. The Project Manager will serve on the PSC in an Ex-Officio capacity. The Executive Secretary of the LCBC shall serve as Chair of the PSC. More specifically the PSC shall:

- Assume oversight responsibility for the project;
- Meet at least on an annual basis or at the call of the Chair;
- Provide general guidance and direction to the Project;
- Assist in identifying and allocating Project support for activities consistent with Project objectives;
- Annually review and assess the progress of the Project and its components;
- Annually review and approve the work plan and updated budgets of the Project and its activities;
- Provide strategic direction on the work plan;
- Provide guidance to the PMU in coordinating and managing the Project and its activities;
- Create mechanisms for interaction with the Private Sector, NGOs and other stakeholder communities; and
- Continue to seek additional funding to support the outputs and activities of the project.

In addition to the above, the Executive Secretary of the LCBC shall serve as part of the selection committee for the Project Manager.

Terms of Reference
Short and Long Term Regional and International Consultants

Short-term international consultants will give technical/expert inputs to the Outputs and specific Activities of the project, act as resource persons, and give methodological guidance in organizing meetings and workshops. Regional and International expertise will be required in the following general categories (detailed Terms of References will be prepared by the Project Manager during project implementation):

- Capacity Building of Regional Institutions;
- Policy Review and Reform;
- Public Participation and Involvement/Civil Society Engagement;
- Community Assessment;
- Monitoring Systems;
- GIS capability;
- Ecology;
- Integrated Water Resources;
- Groundwater Resources;
- Land Degradation and Desertification;
- Water Quality;
- Public Participation and Involvement/Civil Society Participation; and
- Other Areas as may be deemed necessary by the Project Manager.

Abbreviated Terms of Reference Short and Long Term National Experts

National Experts, for both short and long term assignments, will be recruited from qualified candidates from the participating countries to work at the national and regional levels. National Consultants will play an important role in project execution to ensure, to the maximum extent possible, that project activities are country-driven and can reinforce the responsibility of the participating countries to produce a coherent strategic plan for sustainable river basin management for the Senegal River Basin. The following National Experts will be recruited. The detailed Terms of References will be prepared by the Project Manager during project implementation.

National Experts will be recruited, as available, to assist the work of the project in the following technical areas:

- Regional Institutional Capacity Building;
- Policy Review and Reform;
- Public Participation and Involvement/Civil Society Involvement;
- Monitoring Systems;
- GIS capability;
- Groundwater Expertise;
- Ecology;
- Water Resources;
- Integrated Ecosystem Management;
- Land Degradation and Desertification;
- Water Quality; and
- Other areas as may deemed necessary by the Project Manager.

ATTACHMENT 8

Pilot Demonstration Activities

The following Pilot Demonstration activities were the subject of a PDF-C led by the World Bank. The descriptions, activities, logframes, timetables and budgets have been the subject of numerous regional consultations with the LCBC, government representatives, and other stakeholders in the participating countries. A report of activities undertaken during the PDF-C will appear in the Project Appraisal Document that will be submitted to the GEF by the World Bank.

It should be noted that the budgets that are a part of each of the following Pilot Demonstration Activities are funds that have already been incorporated into the Detailed Budget which appears as Attachment 1 of this Project Document.

Pilot Demonstration Activity #1

Short Title: Lake Chad Shoreline and Northern Diagnostic Basin Pilot Projects

Countries: Cameroon, Chad, Niger and Nigeria

Project Duration: 3 Years

GEF Budget: US\$ 800,000

Co-Finance: WWF US\$ 155,000; LCBC US\$ 30,000; Cameroon US\$ 30,000; Chad US\$ 30,000; Niger US\$ 30,000; Nigeria US\$ 30,000.

Preface:

As originally conceived the two pilots that are the subject of this activity were to be separate demonstration activities. However, for reasons of the common theme that these two initiatives share, and for reasons of efficiencies that can be captured by twinning these two demonstration activities they now appear in the text that follows as two distinct but closely related initiatives having a common budget, a single timeline, and a single logframe matrix. The common theme that unites these two demonstration activities is that of protecting the integrity of Lake Chad's unique shorelines and the globally significant biodiversity they harbor and assisting local populations to take a sustainable approach to the resources of the shorelines area. It has been calculated that efficiencies to be realized by twinning these pilot demonstration activities is over US\$ 50,000.

Introduction/Brief Context:

Lake Chad and its associated wetlands exist in a dry land setting and thus form a quite unique and fragile ecosystem. It is one of the major wetlands of the Sahel zone. The Lake biome plays a very distinct and significant role in the ecology, hydrology and economy of the Lake Chad basin.

The hydrology of the lake is not fully understood but it is generally believed that, apart from large-scale water abstractions (particularly irrigation schemes), existing activities and functions could easily be maintained even at current very low levels of the lake. However, increasing population in the area, both from the high natural birth rate and increased immigration from countries as far away as Mali and Senegal. The area will come under increasing threat of degradation to the detriment of local populations and the ecological integrity of the area. There is no proper understanding of water demand, and there is not functional coordinated approach to water use and disposal in the sensitive shoreline zone of the lake.

Further, it is clear that a decline in rainfall has caused a serious threat to farming, pastoral and fishing activities in the international Lake Chad Basin., leading to serious upstream and downstream degradation of the ecosystem. To address this threat it is essential to combat land degradation including degradation of vegetation, which is exacerbated by sand encroachment in areas on both sides of the Cha/Niger border. Reversing degradation of soils in tributary basins will require efforts to promote sustainable water management practices and preserve biodiversity. The chances for survival and reproduction of plant and

animal species will be improved through sand dune fixation by biological means (planting).

The selection of this pilot demonstration activity has been driven by:

- Recommendations from the LCBC and Member States;
- GEF guidelines in OP#9 of the GEF Operational Programs;
- The principles of integrated ecosystem management;

Pilot Project Areas:

Lake Chad Shorelines Component

Lake Chad and its shores perform a number of important functions such as water supply to polders, recharge of groundwater in surrounding aquifers and the control of salinity and maintenance of water quality. Additional to these functions, the lake supports biodiversity of global significance as well as major economic activities that include fishery, livestock industry, water-based transport industry, collection of non-wood forest products and receding moisture and irrigation agriculture.

A total of 120 species of fish have been identified in the lake and lower reaches of Chari River. There is no reason to believe that fish stocks have diminished in recent years, and catches show no evidence of overfishing. However, fishers are evidently using smaller mesh sizes and the uses of boats and outboard motors have increased, thus bringing into question the longterm sustainability of the area fishery. Further, because of changes in the lake environment since 1973, there have been considerable changes in composition of fish species. The current estimates of annual fish production from the lake are 60,000 to 70,000 tonnes.

The most common crop production system on the Lake Chad shores is lake bottom cropping and receding moisture cultivation. Villagers diversified from relying entirely on fishing to farming the emergent lake floor as floodwaters receded. Since there has been no history of farming rights associated with this activity, the practise represents a source of serious civil conflict. The performance of various irrigation schemes developed in recent decades in Nigeria and Chad has been poor.

During the dry season, there is a large migration of herders into the Lake Chad shores. This leads to intense competition for pasture which, combined with the absense of recognised management authority over farmlands and pastures exposed by receding floods, could also cause serious civil conflict. There is also a heavier disease burden on livestock when water borne diseases prevalent on the lake floor find a favorable environment to flourish due to the mixing of large concentrations of livestock.

Lake Chad and its associated, highly variable shorelines are also an important site for global biodiversity. The area is unique in the sense that it forms a specialised biotope with the presence of species that are not normally found at the same latitude and in this type of climate. Lake Chad is an important stop on a major route for Palaearctic migrant birds. About 70 species of birds move through, and depend on the resources of the Lake basin each year, especially pintail *Anas acuta* (about half a million), garganey *Anas querquedula* (about 400,000) and ruff *Philomachus pugnax* (about 130,000). The site qualifies for inclusion in the Ramsar List of Wetlands of International Importance. The Lake Chad sector in each of the riparian countries has also been identified as a globally significant Important Bird Area (IBA).

Northern Diagnostic Basin Management Component

The intervention zone for the shoreline protection component of this demonstration activity covers the districts of Diffa, N'Guigmi, and Maïné-Soroa in Niger; and Bol, Liwa, and Rig-Rig in Chad. Project interventions during this component will be restricted to a radius of 20 kilometers around the above mentioned localities in order to optimize the use of technical services.

In Niger:

Located in the extreme east of Niger the Department of Diffa covers 140,000 sq. km. or 10% of Niger's national territory. This department is divided into three districts: Maine-Soroa, Diffa, and N'Guigmi. The population of Diffa, estimated at 210,000, consists of five major groups: the Kanouri, the Boudouma, the Peul, the Tombou, and Arabs. To the east the plain is used for raising livestock, especially during the rainy season when vast ponds appear. In the dry season it is generally abandoned as pasturelands become exhausted. However, in the southern fringe, along the river, the farming population remains throughout the year. Immediately north of the Komandogou, the Koala is pastoral plain where wells reach great depths and livestock is pastured year round. To the west the N'Gurbaye is a vast region with scattered "sinks", or pockets of arable land. The mineral natron is mined in this area. The sinks hold great hydro-agricultural potential, and at present crops of red peppers, manioc, and maize are extensive. The rest of the department consists of the vast Manga plateau, an area comprised of anchored dunes cut by broad depressions where the water table is accessible at less than 30 meters.

In Chad:

The intervention zone in Chad covers the area of Kanem-Lac. Administratively the region is divided into two departments, Lac and Kanem. The Lac department has an area of 22,300 sq. km., with Bol as the seat of government. It is divided into three sub-preferences: Bol, N'Gouri, and Doum-Doum. The latter oversees the post of Liwa. Kanem Department, the larger of the two, has Mao as its seat of government and covers an area of approximately 114,000 sq. km. It also comprises the sub-prefectures of Mao, Rig-Rig, and Mondo. The population of the entire lake prefecture is estimated to be 292,000, and that of Kanem, 268,000. Apart from Bol and Mao, which have populations of 15,000 each, population distribution favors small villages around the wadis. The dominant ethnic groups are the Kanembous, the toundjous, the Kouris, the Boudoumas, the Arabs, and the Peul. In this region, where annual rainfall amounts to less than 300 mm, Lake Chad plays a key role in the economy. There are three separate hydrological zones:

1. The continental zone, inland from the lake, consisting of the Kanem erg. Irrigated crops are the economic mainstay for the inhabitants of this area;
2. The intermediate zone. This zone is located along the lake shoreline. Many of the wadis of this zone are flooded by the lake either seasonally or permanently. Flooding of these areas permits the use of polders and recession agriculture. The proximity of the lake also makes fishing a productive economic feature;
3. The island zone of the lake. Dominant economic activities in this zone include livestock raising and fishing, with farming occupying a less salient economic niche.

A particularity of this region is the presence of edible blue algae in many of the wadis and pools. The ecology of the intervention zone has given rise to an activity that is unique to the region: lacustrine livestock raising, essentially Kouri cattle which brings significant dairy potential. In the absence of a wildlife inventory it is difficult to assess the number of local species and thus whether or not these species are in imminent danger of depletion to the point of extinction or are being utilized sustainably. It is known however that local species include geese, ostrich, and ungulates.

General Objectives:

To test and promote the joint (transboundary) management of the Lake Chad shoreline through transboundary implementation of RAMSAR Convention guidelines and combat desertification in the northern basin of the Lake through the development of community based adaptive strategies.

Stakeholders:

- Local communities and sub-sectors within these communities
- Environment and development agencies of national governments

- Lake Chad Basin Commission (LCBC)
- Non-governmental organizations
- Populations in the villages of Bol, Liwa, Rig-Rig, Diffa, N Guigmi, and Maine-Soroa;
- Local governments; and
- Environmental and development agencies and NGOs in Chad and Niger.

Specific Objectives:

- Development of effective regional and national project co-ordination structures
- Development of a Management Plan and Monitoring Scheme
- Development of Community Resource-Use Action Plans
- Capacity building at local, national, and regional levels
- Knowledge Dissemination and development of a final report on lessons learned
- Establish a framework for local and transboundary coordination for the coordinated and sustainable use and management of local resources. This activity will involve: creating local and transboundary coordinating entities; producing documents and other communication strategies for farmers and migratory groups; and two workshops in Chad and two in Niger for collaborating stakeholders.
- Protect strategically important agricultural sites in project intervention zones. This activity will involve: preparation of a report on activities underway in the zone for implementing the Desertification and Biodiversity Conventions; training local populations to control sand build-up; preparing an inventory of pastoral resources and local knowledge; supporting efforts to artificially restore pasturelands; and producing a report on water quality and pollution in the basin.
- Test mechanisms for joint management of natural resources; and
- Create greater synergies in implementing a program of joint management consistent with the provisions of the Conventions on Desertification, Climate Change, and Biodiversity.

Expected Outputs:

- A joint management implementation structure in place;
- A joint management plan and monitoring scheme for Lake Chad and its associated, highly variable shorelines produced according to RAMSAR guidelines;
- Natural Resource-use action plans and sectoral codes of conduct developed and implemented in 4-6 communities selected according to agreed criteria;
- The capacity of selected local communities and the four national government agencies strengthened to undertake the Ramsar Management Planning process;
- An approach developed and adopted by the participating countries for extension of the results of this demonstration activity to other shoreline areas in the basin;
- A final report of the activity and conclusions of the activities of this demonstrated project and lessons learned;
- Local and transboundary coordination structures in place for the sustainable exploitation and management of local resources; and
- The documented protection of strategic sites in the target area.

Executing Arrangements: WWF-International, the Nigerian Conservation Foundation, and the RAMSAR Convention will execute that portion of the demonstration activity related to their finance. Upon the formation of the PMU, discussions will take place between and among the WWF, representatives of the Ramsar Convention, the LCBC, the participating countries and the PMU to determine final execution modalities, including the location for the project office.

Indicative Budget Summary:

The total indicative budget for this demonstration activity is US\$ 1,105,000. Of this amount the GEF

contribution is US\$ 800,000. The GEF contribution will be apportioned as follows:

<u>Personnel</u> ⁶ :	US\$ 237,000
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<u>Capital Purchases</u> :	US\$ 187,000
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<u>Operating Costs</u> :	US\$ 197,000
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<u>Training</u> :	US\$ 60,000
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<u>Meetings</u> :	US\$ 53,600
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<u>AOS (8%)</u> :	US\$ 60,400
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<u>Project Total:</u>	US\$ 800,000
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A more detailed budget appears as Appendix 3 of this pilot demonstration activity.

⁶ Includes both International and national Experts.

LAKE CHAD SHORELINE MANAGEMENT PLAN AND SHORELINE PROTECTION MEASURES

Objectives	Outputs/Outcomes	Indicators of performance	Means of verification	Risks and Assumptions
1. <u>Effective regional and project coordination</u>	Establishment of operational PMU and Pilot Project Teams.	<ul style="list-style-type: none"> PMU & PPTs fully established and operational; Effective working relationship developed between elements of the GEF Project team and WWF. 	<ul style="list-style-type: none"> Pogress reports; MOUs Integrated Work Teams 	<ul style="list-style-type: none"> PMU and PPT operationality and coordination;
2. <u>Stakeholder Capacity building and empowerment;</u>	Target communities capacity effectively enhanced and strengthened.	<ul style="list-style-type: none"> Relevant modules, training and courses provided ; Awareness and education; Strong structure basis established for the continuity of activities in the long term; 	<ul style="list-style-type: none"> Report and program; courses/modules document List of trained participants; Seminars and workshops; 	<ul style="list-style-type: none"> Appropriate modules and training provided to relevant stakeholders; Inclusiveness of relevant institutions and stakeholder groups;
3. <u>Protection of Lake Chad Shrorelines</u>	Protection of the international shorelines of Lake Chad consistent with RAMSAR protections and in cooperation with the CCD.	<ul style="list-style-type: none"> RAMSAR designations achieved; Specific and ongoing working relationship with the CCD achieved; Joint management structure achieved; Natural resource action plans in six communities; Documented protection of strategic sites in the shorelines area. 	<ul style="list-style-type: none"> RAMSAR designations received; Specific approaches to securing the long term involvement of the CCD developed in written form and available in the PMU; Country commitments received in writing and available in the PMU; Long term management structures in place and functioning; Concrete evidence of changed approaches to achieve sustainable use of shoreline resources; 	<ul style="list-style-type: none"> Means and capacity to work effectively in remote and sometimes insecure areas; Commitment of relevant institutions and stakeholders;
4. <u>Combat Desertification in the Northern Diagnostic Basin of lake Chad</u>	Protection of strategically important sites in the Northern Diagnostic Basin;	<ul style="list-style-type: none"> Action plans in targeted communities developed; Strategically important agricultural sites protected; 	<ul style="list-style-type: none"> Action Plans developed and available in the PMU; On-site visits by representatives of the PMU and independent M&E personnel; Evidence of the involvement of the CCD in the effort; 	<ul style="list-style-type: none"> Means and capacity to work in difficult and sometimes insecure areas; Successful involvement of stakeholders in the preparation of the guidelines; Community level commitment to the process and to the longer term sustainability of project approaches and results.

Shorelines/Shoreline Protection Measures/Timetable

Activity	Year 1				Year 2				Year 3			
Establish and Operationalize Project PMU	*											
Procure/provide vehicles and equipment		*										
Select/Sign MOU with Executing Agency/Shorelines	*		*									
Recruit/Sign MOU with Executing Agency/Northern Diagnostic Basin (NDB)	*											
Devise Workplan for Lake Chad Shorelines, including TsOR for International and National Consultants, format for financial reporting, and M&E requirements		*										
Devise Workplan for NDB, including TsOR for International and National Consultants		*										
Select Pilot Demonstration Project Officers in each country		*										
Select necessary International Consultants			*									
Select necessary National Experts			*									
Target Communities Selected/Lake Chad Shorelines			*									
Target Communities Selected/NDB			*									
Implementation of Lake Chad Shorelines Demonstration Project			*	*	*	*	*	*	*	*		
Implementation of NDB Demonstration Project			*	*	*	*	*	*	*	*		
Final Report Developed-Lessons Learned/Lake Chad Shorelines									*	*	*	
Final Report Developed-Lessons Learned/NDB									*	*	*	
Final Report Developed/Replication Strategies for both Pilot Demonstration Activities									*	*	*	

BUDGET: Lake Chad Shorelines/ Northern Diagnostic Basin Pilots						
	3 YEAR DETAILED PROJECT BUDGET (USD)					
Line Items			Year 1	Year 2	Year 3	Total
PERSONNEL						
International Consultants			20,000	30,000	10,000	60,000
National Experts			40,000	40,000	50,000	130,000
Community Based Expertise			5,000	5,000	5,000	15,000
Secretarial/Administrative Support			14,000	9,000	9,000	32,000
Personnel Sub-Total			79,000	84,000	74,000	237,000
CAPITAL COSTS	quantity	unit cost	Year 1	Year 2	Year3	Total
Field equipment			30,000	25,000	-	55,000
Vehicles (2)	2	35,000	70,000			70,000
Office Equipment/Materials			17,000			17,000
GIS Equipment			25,000			25,000
Maintenance				10,000	10,000	40,000
Capital Costs Sub-Total			142,000	35,000	10,000	187,000
OPERATING COSTS						
Travel/DSA- International Consultants			30,000	40,000	30,000	100,000
Travel/DSA-National Experts			20,000	30,000	20,000	70,000
RAMSAR/WWF Support Missions			9,000	9,000	9,000	27,000
Operating Costs Sub-Total			59,000	79,000	59,000	197,000
TRAINING						
LCBC Staff			0	7,500	7,500	15,000
National/Community Based Training			5,000	15,000	30,000	50,000
Training Sub-Total			5,000	22,500	37,500	65,000
MEETINGS						
Regional/Local Meetings			10,000	20,000	23,600	53,600
Meetings Sub-Total			10,000	20,000	23,600	53,600
AOS @8%						60,400
Demonstration Project Total/Lake Chad Shorelines and NDB						800,000

Project Demonstration Activity #2

Short Title: Land Use Impacts in the Head Waters of the Lake Chad Basin.

Country: Central African Republic

Duration: 3 Years

GEF-Budget: USD 250,000

Co-financing: LCBC USD 30,000 (in kind); CAR USD \$20,000 (in kind)

Introduction/Brief Context:

Approximately 75% of the mean annual runoff of the Chari at N'djamena originates from the Central African headwaters area of the Lake Chad Basin. Changes in land use in the Central African portion of the Lake Chad Basin impact the hydrological regime of the Chari and result in degraded aquatic ecosystems downstream in Chad and impact the regime (levels and water quality) of Lake Chad. Development of national and regional policies to control this trend are hampered by a lack of information on ongoing land use changes and their more precise impacts on water resources in this region. To date, relevant water resource and land use data from CAR are not included in the hydrological decision support model of LCBC. Without this data precise implications for and impacts of water uses in the basin cannot be fully understood.

This development and selection of this pilot has been driven by:

- Recommendations of the LCBC and the Member States;
- Consideration of GEF guidelines under OP#9;
- The principles of integrated ecosystem management; and
- Consultations with supporting institutions and stakeholders.

Pilot Project Area:

The area of interest in which the pilot project could be located covers the entire Central African Republican portion of the Lake Chad Basin, some 35% of the national territory of the CAR, corresponding with an area of approximately 215,000 km². This area can roughly be divided into two parts: the north-western part accounting one third of the area and the north-north-eastern part covering the remaining two thirds. All presently protected areas are located in the North-north-east, whereas agriculture land-use predominates in the north-west. Livestock was previously concentrated in the north-west but is now anticipated to become a factor in the north-east as well.

Land use in the north-eastern part of the CAR has, until recently, been based on wildlife utilisation for sport hunting. Poaching, which has increased as the security situation declined has led to a drop in these revenues and the area is increasingly being occupied with unplanned settlements and nomadic camps. Fisheries are one of the most widespread and important activities, particularly along the transboundary Bahr Aouk.

The distinction in land use between the north-west and the north-eastern part of the CAR is consistent with long established practices among different ethnic groups. In general, the Gbaya and Sara live in the Northwest, whereas northern groups and people of Banda descent dominate the sparsely inhabited north-east. Fulbé pastoralists are mainly found in the Northeast, whereas an increasing number of Arab pastoralists are found in the Northeast. While CAR has a total population of 3.300.000, based on figures of 1999, no information is available on population figures for the Lake Chad basin part of the CAR. A rough population estimate would be approximately 1-1.2 million.

Two vegetation zones predominate, the northern portion of the basin is classified as Sahel-Sudan savannah while the area further south is characterized as true Sudanian savannah. In the Bamingui-Bangoran National Park, well-developed gallery forests line the watercourses and provide a robust

environmental buffer zone protecting the ecological integrity of rivers in the area. These forests also provide habitat for “forest species” well into the savannah environment.

The northern part of the CAR has supported good stocks of wildlife and still represents a significant wildlife resource in Africa. It is only recently that adverse effects of illegal hunting and droughts have resulted in loss of biodiversity.

Long Term Objective:

To effectively integrate the headwaters area of the Lake Chad Basin, located in the CAR, into an overall ecosystem approach to the management of the Lake Chad Basin Ecosystem.

Specific Objectives:

- To integrate relevant data and information from the Lake Chad Basin headwaters area of the Central African Republic (CAR) in the hydrological data base and decision support systems of Lake Chad Basin Committee (LCBC);
- To develop a comprehensive, up-to-date land use information system, through the compilation of existing natural resource surveys and the execution of an overall aerial survey to improve on existing information; and
- To raise awareness on the importance of the CAR as head water source for the Lake Chad Basin, leading to increased local, national, regional, and international support for conservation of biodiversity through effective land use planning and transboundary co-ordination.

Stakeholders:

- The regional Lake Chad Basin Commission and the entire population of the Lake Chad Basin;
- The full range of ethnic groups which depend on the resources of the headwaters area;
- CAR as a whole; and more specifically,
- The CAR Ministries of Environment, Agriculture, Mines and Energy (Direction of Hydraulics), Transport, and the National Lake Chad Basin Committee.

Proposed Activities:

- *Integration of the CAR into LCBC decision support system:* the presently existing decision support model under continuing development by the LCBC would be updated too include several upstream branches of rivers located in CAR, while incorporating preliminary water use estimates based on land use studies of this project.
- *Studies on land use change:* i) extension of existing land use information system presently established by ICRA for the entire CAR headwaters section of the Lake Chad Basin ii) incorporation of existing data and the results of existing studies iii) use of low level aerial surveys in the northern CAR to make a preliminary assessment of existing wildlife and livestock populations: and iv) a literature search too achieve improved understanding of the relationship between different forms of land use, run-off patterns, and river discharges on a river basin scale.
- *Integration & Communication:* i) elaboration of cost-benefit analyses of different land use options based on outcome of adapted hydrological model and land use surveys, ii) publication of results obtained by the project in appropriate media; and iii) development of preliminary land use planning options.

Expected Outputs:

- Hydrological data on the CAR part of the Lake Chad Basin made available to and integrated in the hydrological data base and decision support systems of the Lake Chad Basin Committee (LCBC);
- Availability of a comprehensive, up-to-date land use information system regarding the CAR part

- of the Lake Chad Basin; and
- General awareness raised on the national, regional, and international importance of the CAR as head water source of the Lake Chad Basin, leading to increased support for conservation through more effective land use planning and enhanced transboundary co-ordination.

Executing Arrangements:

Execution arrangements will be the primary responsibility of LCBC in cooperation with the CAR. The PMU will act as liaison and facilitator as well as the interim office for this pilot demonstration activity.

LAND USE IMPACTS IN THE HEADWATERS OF THE LAKE CHAD BASIN

Objectives	Outputs/Outcomes	Indicators of performance	Means of verification	Risks and Assumptions
<u>1. Effective regional and project coordination</u>	Establishment of operational PMU and Pilot Project Teams.	<ul style="list-style-type: none"> PMU & PPTs fully established and operational; Effective working relationship developed between elements of the GEF Project team and WWF. 	<ul style="list-style-type: none"> Pogress reports; MOUs Integrated Work Teams 	<ul style="list-style-type: none"> PMU and PPT operationality and coordination;
<u>2. Compile Existing Information and Data from CAR</u>	A Final Report on Existing Information and Data Including a Preliminary Evaluation of Gaps	<ul style="list-style-type: none"> Consultants Reports Received and on file in the PMU and Accepted by the ProjectManager; 	<ul style="list-style-type: none"> Finalized Reports on file in the PMU. 	<ul style="list-style-type: none"> Access to the communities in the region is problematic; Sufficient Information and Data is available.
<u>3. Increase Local/National/Regional/International Awareness of, and Support for, Biodiversity Conservation in the CAR Headwaters Through the Development of a Planned Approach to each Targeted Element</u>	A detailed plan for, and initial content of, informational materials and presentations to increase awareness.	<ul style="list-style-type: none"> Consultant TsOR Consultants hired Approach to each targeted group developed Final written reports 	<ul style="list-style-type: none"> Field visits to verify consultations Consultants reports received and deemed complete by the Project Manager Existence of a follow-up action plan 	<ul style="list-style-type: none"> Means and capacity to work effectively in remote and sometimes insecure areas; Commitment of relevant institutions and stakeholders;
<u>4. Compile and Evaluate Existing Natural Resource Surveys form Local Sources and Undertake Aerial Surveys</u>	A compilation of aerial survey results, GIS assessments, and evaluation of the Natural Resource Surveys completed and stored in the offices of the LCBC	<ul style="list-style-type: none"> Consultant TsOR Consultants hired Final approved reports 	<ul style="list-style-type: none"> GIS Studies Aerial Surveys Assessments of Gaps remaining 	<ul style="list-style-type: none"> Additional funding can be found from donors during the first Donor's Conference

Headwaters/Timetable

Activity	Year 1				Year 2				Year 3			
Establish and Operationalize Project PMU	*											
Select/Sign MOU with Executing Agency	*		*									
Devise Workplan for Lake Chad Shorelines, including TsOR for International and National Consultants, format for financial reporting, and M&E requirements		*										
Devise Workplan for NDB, including TsOR for International and National Consultants		*										
Select necessary International Consultants			*									
Select necessary National Experts			*									
Execution of CAR Information and Data Collection Component		*	*	*								
Formatting of CAR Data and Information/Enter into LCBC Database				*	*	*						
Compilation and Evaluation of Natural Resource Studies		*	*	*								
Execution of Aerial Surveys					*	*	*	*				
Execute Efforts to Increase Awareness				*	*	*	*	*	*	*		
Final Report Developed-Lessons Learned/NDB									*	*	*	
Final Report Developed/Replication Strategies for both Pilot Demonstration Activities									*	*	*	

BUDGET: Land Use Impacts in the Headwaters of the Lake Chad Basin					
	3 YEAR DETAILED PROJECT BUDGET (USD)				
Line Items		Year 1	Year 2	Year 3	Total
PERSONNEL					
International Consultants		10,000	15,000	10,000	35,000
National Experts		10,000	15,000	15,000	45,000
Community Based Expertise		5,000	5,000	5,000	15,000
Secretarial/Administrative Support			5,000	5,000	10,000
Personnel Sub-Total		30,000	40,000	40,000	95,000
CAPITAL COSTS	unit cost	Year 1	Year 2	Year3	Total
Office Equipment/Materials		10,000			10,000
Capital Costs Sub-Total		10,000			10,000
OPERATING COSTS					
Travel/DSA- International Consultants		15,000	20,000	15,000	50,000
Travel/DSA-National Experts		10,000	10,000	10,000	30,000
Operating Costs Sub-Total		59,000	79,000	59,000	80,000
TRAINING					
LCBC Staff		0	7,500	7,500	15,000
National/Community Based Training		5,000	10,000	15,000	30,000
Training Sub-Total		5,000	17,500	22,500	45,000
AOS @8%					20,000
Demonstration Project Total/Land use Impacts in the Headwaters of the Lake Chad Basin					250,000