

Project Name: Reversal of Land and Water Degradation Trends in the Lake Chad Basin Ecosystem

Region: Africa

Sector: Natural Resources Management

Project ID: P070252

Grantee: Lake Chad Basin Commission
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1. Country and Sector Background.

Lake Chad is Africa's fourth largest lake, the largest in Western and Central Africa. Its basin constitutes an important freshwater source shared by Cameroon, the Central African Republic (CAR), Chad, Niger, Nigeria, and Sudan. The lake is fed by the Chari River, which flows northward from the highlands of CAR through to southern Chad, supplies approximately 95% of the lake's surface water input. Likewise, the Komadougou-Yobe surface water system which flows from northern Nigeria into Chad, is considered to be of minor significance to the whole of the basin, yet locally significant to the northern reaches of the Lake Chad wetlands. The lake is shallow, with an average depth of 1.5 meters, and is of relatively small volume. The lake is subject to considerable evaporation and yet is not saline.

Surface area of Lake Chad varies considerably, from 2,000 to 25,000 square kilometers in the past 30 years. Indeed, the lake dried out completely in the late 1400s but returned to high levels by the 1600s. Overall lake balance is based on a close interaction between rainfall, evaporation, lateral groundwater flow to the lake, and groundwater recharge under the body of the lake. The most significant feature of the lake balance has been the persistent decline in rainfall over the whole of the basin in the last 30 years. Isohytal contours of mean rainfall have shifted southward by an order of several hundred kilometers, with river runoffs, effluent groundwater flows, and flow thresholds reduced.

Close to 20 million people rely on lake-based economic activities; this is expected to increase to 35 million by the year 2020. Important wetlands and floodplains extend outward from the lake itself, expanding the basin to the second largest wetland in sub-Saharan Africa. The lake, its floodplains, and surrounding wetlands support recessional agriculture, pastoralism, forest regeneration, fish breeding and production, and limited tourism. The basin has also been identified as supporting biodiversity of global significance, with numerous bird species relying on the lake for sustenance during periods of migration.

In 1964, the Lake Chad Basin Commission (LCBC) was established by Cameroon, Chad, Niger, and Nigeria to handle problems of development centered on Lake Chad. At that time, the 'conventional basin' covered approximately 427,000 square kilometers. In 1994, the 'basin' was enlarged to include the upstream part of the basins of the Logone-Chari and Komadougou systems, and thus CAR was admitted as the fifth member country of the LCBC. In 2002 Sudan was added as a sixth member due to aquifers underlying its western border shared with Chad. The 'new conventional basin', which covers 967,000 square kilometers, now takes into account almost all water resources that supply the lake, its floodplains and wetlands, and aquifers in the lake area.

The LCBC, established in 1964, was substantially reformed in 1990, enlarged in 1994 with the addition of CAR as fifth member country, and enlarged again in 2000 to include Sudan. Its current budget consists of contributions from five member countries in the following proportions: Cameroon 26%, CAR 4%, Chad 11%, Niger 7% and Nigeria 52%. Historically, the Executive Secretary is Nigerian, nominated by the Nigerian government and endorsed by the LCBC member countries. Mohamed Sani is the incoming Executive Secretary; the outgoing Executive Secretary, Abubakar Jauro, served for twelve years.

The role of the LCBC has been to ensure the most efficient use of the basin's waters, to coordinate regional (as opposed to national) development, and to assist in the settlement of disputes that might arise between and among the basin states. The LCBC mandate recognises that member countries retain sovereign rights to develop water resources within their jurisdiction, with the exception of Lake Chad itself, where unilateral exploitation of lake surface resources is forbidden. Member states retain the right to plan water development projects in the area of the "new conventional basin", provided that they consult fellow LCBC member countries through the LCBC. Potential development projects are to be screened to prevent the implementation of any measures likely to alter the lake's water balance, its exploitation by other riparians, its water quality, and the biological characteristics of flora and fauna in the region.

The LCBC, with the assistance of UNEP, the United Nations Sudano-Sahelian Office (UNSO) and the Food and Agricultural Organization (FAO), carried out a series of diagnostic environmental studies in the 1980s, resulting in a Lake Chad "Master Plan", which was finalised in 1992 and ratified by the LCBC Heads of State in 1994. This Plan is based on the much smaller 'conventional' basin and does not address transboundary issues as necessary for GEF project intervention. The Plan includes a list of 36 priority projects, many of which have yet to be undertaken and are as relevant today as upon ratification.

2. Project Objectives:

The project has three objectives. The first is to overcome barriers to the concerted management of the basin through enhanced collaboration and capacity building among riparians and stakeholders. The second is to complete a transboundary diagnostic analysis (TDA) and prepare a descriptive framework for the concerted water management across the basin. The third is to prepare a GEF strategic action plan (SAP) for long-term implementation of priority actions to address transboundary issues.

3. Rationale for World Bank Group Involvement:

The World Bank's most visible effort in the Lake Chad basin is providing support to the Chad-Cameroon petroleum pipeline several lending vehicles. Petroleum production facilities are located in Doba, which lies within Logone floodplains, which provide surface water flow into Lake Chad. Both the Petroleum Sector Management Capacity Building Project in Chad and the Petroleum Environmental Capacity Enhancement Project in Cameroon are to contribute to improved national

capacity in management of environmental aspects of petroleum projects. Once these environmental ministries are considerably strengthened, they should be able to support a more concerted land and water management initiative in the greater Lake Chad basin. An IDA-financed Rural Development Pilot is in project preparation stage, as is a community-driven development approach to all Bank interventions currently under preparation.

Private sector support of environmental management in the Lake Chad basin, independent of its coordination with the two aforementioned Bank projects, is not anticipated. The few large-scale mixed public-private commercial agricultural activities in the Lake Chad basin are barely economically feasible, and the outlook for further private sector investment in commercial activities reliant on Lake Chad land and water resources is poor.

The Bank is increasing its efforts in the environment and water supply sectors at both state and federal levels in Nigeria and is also supporting development of a national water resource management strategy. There are several large urban water supply projects with significant institutional reform and/or restructuring components underway in both Niger and Nigeria. The Niger Water Sector Project, includes a water resource management element that may lead to several water resource management institutional reforms.

World Bank activity in Cameroon, the Central African Republic, and Chad has been at a relatively low level in terms of absolute funding in the last decade. It is expected that entry into these countries via a multi-country vehicle such as this might be a good way to re-establish contact in water resource / environment sectors.

This project is one of a cohort of three GEF projects under development in the region. A separate GEF project now in PDF-B phase in the Niger River Basin in cooperation with the Niger Basin Authority includes two of the members of the LCBC, Niger and Nigeria, as well as seven others, and will engage transboundary issues the length of the Niger. Similarly, there is a GEF project in PDF-B phase in the Senegal River Basin in collaboration with the Governments of Senegal, Mauritania, Mali, and Guinea. Each of these three projects is being prepared under co-implementation with the United Nations Development Program in order to build on complementarities and to be able to attract as much additional donor support as possible.

The Lake Chad surface body itself, as well as the surface rivers and ground aquifers which feed into it, sustain the livelihood of millions of people who live in and around it. The Global Environment Facility and several NGOs have started the process of reinvigorating the Lake through community mobilization and shoreline protection and management. The Bank has been approached to join this effort and to lend its comparative advantage as an instrument for policy dialogue and donor coordination.

4. Project Description:

The Bank part of the project has three outputs: Component 2 “enhanced regional policy initiatives and institutional mechanisms to address transboundary issues”; Component 5 “several demonstration projects to test and validate methodologies, stakeholder involvement and implementation modalities”; and Component 6 “GEF SAP designed and endorsed with implementation methodologies validated and donor support mobilized”. The UNDP is implementing three separate outputs as follows: Component 1 “an established Program Co-ordination Unit (PCU) and nominated lead agencies to drive and co-ordinate TDA completion, pilot projects, policy initiatives and institutional linkages” ; Component 3 “strengthened engagement of stakeholders”; Component 4 “a completed TDA and a synthetic framework for concerted management of the basin”, and Component 5 “several demonstration projects to test and validate methodologies, stakeholder involvement and implementation modalities.”

With regards to the pilots within Component 5, the World Bank working with the LCBC and its member states to implement three pilots: the Lake Fitri pilot, the Komodougou-Yobe / Hadejia-Nguru project, and the Waza-Logone project. Similarly, UNDP is implementing three pilot projects, two of which have become 'twinned' for smoother execution arrangements: the Lake Chad Shorelines project and the Niger-Chad northern basin project; and, separately, the Chad-CAR (Chari) transboundary project. For each project, execution arrangements are to be specified, as World Bank and UNDP will not execute directly. The Hadejia-Nguru and Waza-Logone are ongoing projects to which the GEF is adding a specific value-added element, but the others are all to be launched as new projects. Lastly, the World Bank has a small element within Component 5 to bring lessons learned from the pilot projects into the design of the SAP for the Lake Chad Basin.

5. Financing Plan:

Total project cost is estimated at \$18,066,800, of which GEF project financing is \$10,433,500, and PDF financing is \$693,500. Total current co-financing is \$7,293,300 from bilateral donors, LCBC, and LCBC member countries. Co-financing figures are indicative of the anticipated participation of on-going projects to related activities of the GEF-financed project. As an example, UNDP is funding in Chad US\$ 2.6 million in water and land resource projects. 10 percent of this amount will be directed toward transboundary activities.

LCBC has an annual budget, funded by member states, of US\$1,180,000, of which LCBC has committed an equivalent percentage to be applied over the lifetime of the project (thus USD\$411,800). The contribution in kind, accepted by the six governments through their on-going projects, represents a total of USD\$1,750,000. In addition, the German cooperation (BMZ) is funding LCBC's regional project "Study of the Chari-Logone Groundwater Resources" for an amount of US\$617,600 and it is expected that outputs of this project will be developed and used by the GEF-financed project. DGID is providing co-finance of US\$ 1,930,000, while DFID is providing an additional US\$ 2,078,900. Associated capital and recurrent water sector investment in Lake Chad on the part of the six member countries is estimated at more than \$20 million.

6. Implementation Arrangements:

Direct and ongoing oversight of project activities will be the responsibility of the executing agencies through the Project Management Unit (PCU). The PCU will comprise a Project Manager, Director of Administration and Finance, 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 Steering Committee (PSC) will be created. The PSC will generally oversee project implementation activities. Its membership will include representatives from the LCBC member countries, the LCBC staff, participating GEF implementing agencies, and 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. Thematic and geographic Committees will be created as necessary to continue and finalise development of the TDA and the SAP.

The project will be implemented according to a provisional workplan. 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 World Bank and UNDP country offices, will assure that the technical assistance to the LCBC member countries will continue and guarantee that the national and regional priorities

agreed by the riparian States are substantively and coherently accommodated within the 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 agencies implicated in land and water management.

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. 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.

The respective WB and UNDP task teams 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 teams as the project is finalized 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.

7. Sustainability:

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.

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 PDF-C preparation phases, 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.

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.

The financial commitment of Governments is at this time largely in-kind. There has been recent re-energization 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, 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.

8. Lessons Learned from Past Operations in the Country/Sector:

The Lake Chad Basin GEF project is the first 'International Waters' focal area project in West and Central Africa. More specifically, it is registered under Operational Program number 9, for Integrated Land and Water. Most of its learning is coming in 'real-time' as cross-learning from the two like GEF projects under preparation – the Niger River Basin and Senegal River Basin GEF projects. The Lake Chad Basin Commission staff members and LCBC Government GEF focal points also have been given the opportunity to learn from consultants who have been preparing pilot project components alongside the LCBC.

The current GEF project under preparation has learned considerably from its long incubation phase. There are several seminal studies on the institutional and hydrogeological history of the LCBC and the conventional basin; the LCBC has a well-organized library and its staff is well-versed in this literature.

General lessons to acknowledge are: the need to build upon national-level water resource and environmental management institutional capacities first and foremost; set the full project up so that there is some opportunity for 'results on the ground' early on in order to stimulate interest; provide sufficient opportunities for national interaction on technical and political working committees in order to build communication channels; blend hydrological /technical goals for success with institutional goals for success; etc.

9. Program of Targeted Intervention:

The Lake Chad Basin GEF project is not a program of targeted intervention. Its aim is to decrease environmental degradation in the Lake Chad basin, and thus indirectly foster positive global and local externalities. As most, if not all, of the residents of the Lake Chad basin are poor, then any benefits of the project will accrue to the poor. However, these benefits will not be targeted to poorer segments of the total beneficiary population.

10. Environmental Aspects (including any public consultation):

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.

The Bureau of the RAMSAR Convention and the World Wild Fund for Nature are currently in the process of working with four countries which share the shoreline of Lake Chad to ratify the RAMSAR convention so that they can apply for designation as RAMSAR-protected shoreline. The Nigerien shoreline and the Cameroonian shorelines have been designated, and the Nigerian designation is in process. It is the intent of the Lake Chad GEF project that a follow-up effort would be made to finance preparation and implementation of a management plan for protection of this transboundary shoreline for mutual benefit of the inhabitants of the people and the flora and fauna present in its waters.

There has been an Environmental and Social Assessment completed of the project in October, 2001, in the field. Four environmental and social safeguards were found to have been pertinent to this project as follows: OP 4.01 Environmental Assessment, OP 4.04 Natural Habitats, OP 4.30 (and OP/BP 4.12) Involuntary Resettlement, and OP 4.37 Dam Safety. For a tabular representation of safeguards as they relate to the pilot projects, see below. The report was finalized in November/December 2001 and finalized and disclosed in January of 2002. Subsequent to this report, there was a dam safety specialist who proceeded to visit Maga Dam at the Waza Logone pilot site in Northern Cameroon and the Tiga Dam and Challawa Gorge sites within the Hadejia-Nguru Wetlands Conservation Project site in Northern Nigeria in March of 2002. These reports have been disclosed as of March 2002. The project is in the process in disclosing an Environmental Action Plan, a Plan of Action, as well as a Process Framework for this Project.

World Bank Safeguard Policies As Applicable to Pilot Project Interventions

	Waza Logone	Komadougou-Yobe Basin	Desertification	Lake Chad Shoreline	Lake Fitri	Chari River Transboundary
4.01 Environmental Assessment	Applies to all pilot projects including co-financed components Requires public consultation and dissemination of conclusions					
4.04 Natural Habitats	Enhanced or no significant changes					
4.30 Involuntary Resettlement (and OP/BP 4.12)	Although it appears no one will be displaced/resettled, all pilots involve negotiated changes to natural resource access rights/usufruct rights.					
4.37 Safety of Dams	Proposals to increase releases from existing dams	Not applicable				

The stakeholders were consulted to the extent that they were visited during the site visits by the consultants hired to prepare the initial technical demonstration reports as well as when the Environmental and Social Assessment team may have been to travel to the area of the pilot project

during the period of October 2001. For the demonstration projects of Waza Logone and Hadejia-Nguru, these are established projects with ongoing relationships between communities and project teams. For the other four proposed project sites, consultation mechanisms have been to ask NGO or governmental contacts to call ahead and to set up a representative site to visit a day or two in advance. Then a small, joint LCBC/ World Bank / UNDP team had visited a community within the proposed pilot project area to assess the community's interest in the overall development objective as well as the specific proposed pilot project as well as the proposed mechanisms by which that pilot would operate within the community's jurisdiction. A townhall meeting, a small group, a visit to a family, or a individual interview -- usually all of these were employed at some point.

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