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LAKE CHAD BASIN COMMISSION

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Water for Agriculture and Energy in Africa
The Challenges of Climate Change

HIGH-LEVEL CONFERENCE ON WATER FOR AGRICULTURE AND ENERGY IN AFRICA: THE CHALLENGES OF CLIMATE CHANGE

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ROUNDTABLE: TO SAVE LAKE CHAD BACKGROUND PAPER

I. THE LAKE CHAD BASIN, A BET IN DANGER FOR THE FUTURE

I.1. GEOGRAPHICAL CONTEXT

The Lake Chad Basin is a transboundary basin stretching over an area of 2 397 423 km² according to recent studies. It is distributed as indicated in the table below, between Chad, Niger, Central African Republic, Nigeria, Algeria, Sudan, Cameroon and Libya.

Table 1: Distribution of the Lake Chad Basin in member countries of the basin

Country	Basin surface area (km ²)	Portion of basin (%)	Country surface area (km ²)	Portion of basin in the country (%)
Chad	1 109 201	46.3	1 284 000	86.4
Niger	671 868	28.0	1 267 000	53.0
CAR	217 340	9.1	622 980	34.9
Nigeria	180 364	7.5	923 770	19.5
Algeria	89 694	3.7	2 381 740	3.8
Sudan	81 360	3.4	2 505 810	3.2
Cameroon	46 049	1.9	475 440	9.7
Libya	1 548	0.1	1 759 540	0.1
TOTAL	2 397 423	100	11 220 280	

Source: AHT, LCBC/GTZ project, 2007

The Lake Chad Basin is an endorheic (closed)basin, that is, it does not flow into the ocean, but in which the basics of the hydrographic system flows out towards a low point: the Lake Chad is located at an altitude of about 280 m above sea level.

The Lake Chad, the epicentric of human, animal and plant life in the entire region, is the third freshwater lake in the world and the fourth largest lake in Africa after lakes Victoria, Tanganyika and Nyassa. In 1964 when the Lake Chad Basin Comission (LCBC) was established, the Lake Chad water stretched over 25 000 km². But today the Lake has continuously shrunk since the great draughts of the 70s, and now it covers an area of less than 1 000 km² during the annual lowest water levels of the region.

The Lake Chad Basin is made up of the following sub-hydrographic basins:

- **Lake Chad:** It is composed of distinct morphological features visible at an altitude of about 279 metres. It is a habitat for 120 fish species, 372 bird species, a cattle breed called Kuri, unique in the Lake Chad basin, a critical and strategic zone for world biodiversity.
- **Chari-Logone System:** It is the biggest supplier of water flowing into the Lake. It comprises two major courses called the River Chari and the Logone River.
- **Logone flood plains:** They occupy about 25 000 km², the most important being the Grand Yaérés with a surface area of 8 000 km². The Logone floodplains are important areas for fishing and fish reproduction.
- **Komadougou Yobe basin:** It is a water drainage system of 148 000 km² which is a typical example of a water course which loses a large part of its annual flows as a result of infiltration and evapotranspiration. It includes the internationally recognised Hadejia Nguru wetlands.
- **Lake Fitri:** It is Lake Chad in miniature. It provides a lot of pasture in an area where drought abounds.

To these sub-basins characterised by significant flow of water into Lake Chad, must be added Borno drainage zones irrigated by three water courses (Yedseram, Ngadda, Gubio) and the North diagnostic sub-basin, the largest of all with 807 360 km², very famous for its oases.

I. 2. DEMOGRAPHIC CONTEXT

Presently more than 30 million inhabitants, who are nationals of Cameroon, CAR, Chad, Niger, and Nigeria, including migrants from various African countries, live in the Lake Chad Basin where they draw the essence of their livelihood through activities like fishing, agriculture and animal husbandry.

In 1991, the population of the conventional basin was counted at 24 104 000 inhabitants, including the CAR portion. But in 2001, with an annual growth rate of 2.72%, this population was estimated at 30 691 260 inhabitants and was distributed as follows:

Table 2: Population of the Lake Chad Basin

Member State	Pop. 1991 (1000 inhab.)	Density in 1991 (inh/km ²)	Growth rate (%)	Pop. In 2001 (1000 inha.)	Density in 2001 (inha/km ²)
Cameroon	2 100	37	2.72	2 671.2	47
Nigeria	13 856	67.4	2.72	17 648.8	85.77
Niger	2 400	67.6	2,72	3 052.8	53.1
Chad	5 048	14	2.72	6 428.06	17.76
CAR	700	3.5	2.72	890.4	4.5
Total	24 104			30 691.26	

Source: Letter from LCBC

I.3. THE LAKE CHAD BASIN COMMISSION (LCBC)

The Lake Chad Basin Commission was established by the Fort Lamy Convention on 22nd May 1964, by the four riparian countries (Cameroon, Niger, Nigeria and Chad). The Central African Republic became fifth member in 1994 and the Great Libyan Arab Jamahiriya joined the LCBC family as sixth Member State in 2008. Sudan which was officially admitted in 2000 is still an observer country along with Democratic Republic of Congo and the Republic of Congo because the convention of LCBC is still yet to be ratified by Sudan. The mandates of LCBC can be summarised as, sustainable and equitable management and conservation of the natural resources of the basin as well as promotion of economic integration, cooperation, peace and security. Its missions stated in (article IX of the Statutes) of the Commission is as follows:

- (a) To prepare general regulations which shall permit the full application of the principles set forth in the present convention and its annexed Statute, and to ensure their effective application;
- (b) To collect, evaluate and disseminate information on projects prepared by Member States and to recommend plans for common projects and joint research programmes in the Lake Chad Basin;
- (c) To keep close contact between the High Contracting Parties with a view to ensuring the most efficient utilisation of the waters of the Basin;
- (d) To follow the progress of the execution of surveys and works in the Lake Chad Basin as envisaged in the present Convention, and to keep the Member States informed at least once a year thereon, through systematic and periodic reports which each State shall submit to it;
- (e) To draw up common rules regarding navigation and transport;

- (f) To draw up staff regulations and to ensure their application;
- (g) To examine complaints and to promote the settlement of disputes and the resolution of differences;
- (h) To supervise the implementation of the provisions of the present Statute and the Convention to which it is annexed.

I.3.1. Finance

The main source of funding for LCBC is contribution from its member States. These member states together put up the annual budget of LCBC in accordance with the following contribution formula:

Table 3: Funding of the Lake Chad Basin Commission

Country	Contribution
Cameroon	26%
Niger	7%
Nigeria	52%
Chad	11%
CAR	4%

The annual budget of LCBC approved every year by Council of Ministers (COM) at its session is a two line budget. One line is recurrent expenditure while the second line is for development projects. LCBC pays counterpart funding from its development budget for assistance received from donors and development partners for implementation of specific projects.

This percentage of the LCBC budget paid by member states will soon change due to admission of Libya as its sixth Member.

I.3.2. Administrative set up of LCBC.

- The Summit of Heads of State and Government is the supreme organ of the Organisation decision making. It meets once every two years in an ordinary session.

- The Council of Ministers, members of this council are called Commissioners. Each Member State is represented by two Commissioners. It meets every year in an ordinary session to regulate the operation of the Commission.
- The Executive Secretariat headed by the Executive Secretary is the organ for the implementation of statutory provisions, management and execution of the resolution and decisions of the higher authorities on LCBC projects and programmes. Its headquarters is in N'Djamena, Republic of Chad. In order to adapt this organ to the impacts of the global climate change and render it more efficient in view of current challenges and stakes, the Commission has just adopted a new structure for the Executive Secretariat following an Institutional Reform conducted with the assistance of the World Bank and UNDP, within the framework of the LCBC/GEF project. This new structure will be operational as from 2009.

I.4. STAKES AND CHALLENGES OF THE LAKE CHAD BASIN

I.4.1. Environmental problems

The Transboundary Diagnostic Analysis (TDA) carried out in 1989 with the assistance of UNEP later joined by UNSO, led to the identification of seven environmental problems regional in nature. They are listed by order of priority, as follows:

- 1) Variability of the hydrological regime and availability of freshwater;
- 2) Water pollution;
- 3) Low viability of biological resources;
- 4) Loss of biodiversity;
- 5) Destruction and modification of ecosystems;
- 6) Sedimentation of rivers and water courses;
- 7) Invading species.

These Transboundary problems which we later in 2007 conformed by another TDA under the LCBC/GEF are social risks and a threat to the riparian populations of the Lake Chad Conventional basin. They are the product of the combined effects of accelerated global climate change and unsustainable practices in the use of resources by the ever-growing population.

I.4.2. Identified Remote causes

There are three remote causes of the degradation that deserve special attention. They are discussed and presented briefly below:

- **Lack of a sustainable development concept for rational use of natural resources in political programmes.** Governments of all the member countries devote a meagre part of their budgets for the management of biological resources and environmental protection. This is somehow a paradox given that the economy of the region is based on the exploitation of natural resources, be it through agricultural production or direct harvesting of resources. The most plausible explanation is that officials are more concerned with short-term subjects because of the instinct for survival within a context of economic and political instability.
- **Low level of education and sensitisation on environmental issues.** The impression is that decision-makers and people in the region do not really master the link between environmental stability and economic well-being. Proof is that each member State spends large sums of money to fight the effects of environmental disasters than protecting environmental degradation in a proactive manner. With respect to the aspirations of the people, especially as expressed by their representatives, it appears there is little desire for change and this is yet another indication of the lack of environmental awareness. It is noted that various users of resources continue to tap them in an irresponsible manner.
- **Population pressure.** This phenomenon in itself cannot be considered as a major concern. However, the low level of technical knowledge for sustainable exploitation of natural resources in the region and problems of short-term survival (low standard of living), irreversibly lead to careless exploitation of natural resources by the ever-growing population.

I.4.3. Some Achievements

Within the limits of its mandate as spelt out by the statute, LCBC has achieved remarkable success in its operation since its creation in 1964. It has delivered dividends in agriculture (small scale) like promotion of good fishing practices, production of livestock, rural water supply, communication, transport, regional economic integration and cooperation as well as coordination of regional security.

Some of the outstanding achievements include:

- 1) The successful demarcation exercise of international boundaries between Chad, Niger, Nigeria and Cameroon between 1988 and 1992 which now formed the basis of the dispute settlement between Cameroun and Nigeria by International Court of Justice.
- 2) The successful preparation of a Master Plan for the Basin in collaboration with experts from member states and supported by FAO, UNDP, UNSO. The

“Master Plan basically amends the environmentally sound management of the natural resources of the conventional basin”. It was adopted in 1994 by the Summit of LCBC Heads of State and Government, which at the same time launched an international campaign to save the Lake Chad.

- 3) The Strategic Action Plan (SAP) which emanates from the Master Plan was prepared with identification of 36 projects which were formulated as considered to be priority and urgent projects to ensure the continued existence of the people and the natural resources in the sub-region. The project for water transfer (IBWT) from Oubangui to Lake Chad was second in the list of the project contained in the SAP.
- 4) The preparation of LCBC Vision 2025 based on an analysis of the current situation and challenges to integrated management of the basin natural resources. It defines the means to get to the envisaged situation in 2025 vis-à-vis as the short- and middle and long term action necessary to be implemented for the reversal of degradation trends, restoration and conservation of the ecosystem for environmentally sound and sustainable development of the sub region.

The Document “Vision 2025” identified the causes of the current environmental degradation be mainly global climate change, unsustainable decisions, lack of good policy and political will on the part of member states, poor coordination mechanisms, poverty and fragile economic situation of the region. Five challenges to integrated management of the Lake Chad basin Resources were also identified. These include: (i) conservation to preserve water resources, restore vegetations and protect aquatic ecosystems; (ii) restoration of the level of the Lake including wetlands; (iii) fight against desert encroachment; (iv) data collection; (v) regional cooperation.

Today the LCBC is making all efforts deemed necessary in order to achieve the goals of its Vision 2025. That is by 2025 the LCBC and indeed its member states and the development partners would like to see the Lake Chad Region where:

- 1) The Lake Chad, common heritage, and other wetlands maintained at sustainable levels to ensure the economic security of the freshwater ecosystem resources, sustained biodiversity and aquatic resources of the basin, the use of which should be equitable to serve the needs of the population of the basin thereby reducing the poverty level.
- 2) A secure lake Chad region where the national and regional authorities accept responsibility for freshwater, ecosystem and biodiversity conservation and judicious integrated river basin management to achieve sustainable development.
- 3) A lake Chad region where every Member State has equitable access to safe and adequate water resources to meet its needs and rights and maintain its freshwater, ecosystem and biodiversity resources.

The LCBC Vision 2025 did not stop at setting its goal but also provides a way forward on how to get there by:

1. Strengthening of sub-regional cooperation;
2. Development of practical and donor friendly strategies approved by all member states of LCBC;
3. Disseminate the vision and make it acceptable to all;
4. Institutional framework for implementation of the vision at both regional (LCBC) and national (member states) level must be financially and politically supported as well as strengthened for efficiency

II. SAVING LAKE CHAD AND ITS BASIN, AN ABSOLUTE NECESSITY

The problems of the Lake Chad Basin are numerous, severe and of global importance. They call for concrete and urgent solutions not only by LCBC (as a sub-regional institutional framework) and its members but the active and sustained support of international community. The drastic shrinkage of Lake Chad is by itself an imminent world disaster if no action is taken soon. The Lake Chad Basin ecosystems can only be restored with the combined action to reverse the degradation trend as well to re-establish the former levels of Lake Chad and other wetlands at the same time install sustainable and integrated management of all the water resources in the basin.

II.1. ADOPTION OF CAMPAIGN TO SAVE THE LAKE CHAD

The 8th Summit of Heads of Government of LCBC held in Abuja (Nigeria) adopted an international campaign to save the Lake Chad and approved:

1. The Launching of the Campaign to save the Lake Chad
2. Launched the Campaign at the Summit.
3. Directed the Executive Secretary to seek the assistance of UNDP, UNEP, UNESDCO, FAO, and ADB to organise a donors conference.
4. Signed a joint letter calling for assistance from all external support agencies, countries, institutions and organisations.

II.2. EFFORTS BY LCBC

Faced with these challenges and notwithstanding its limited means, the LCBC, and its member States and with assistance from its development partners went into action. It carried out extensive work especially in the area of studies which served the basis for necessary actions to save Lake Chad. The Strategic Action Plan (SAP), developed within the framework of GEF project was adopted in June 2008 by the LCBC Council of Ministers and its now being transformed into an Investment Programme which will be available by the end of 2008, to reverse general ecosystem degradation trends in the Lake Chad Conventional Basin, if funding is obtained.

Similarly, on the basis of an internal inter-sectoral Diagnostic Analysis, the LCBC member States have developed National Action Plans to meet the priorities of the national portion of the Lake Chad Conventional Basin in their respective territories. The total investment budget of all National Plans amounts to 788 million US\$ over a period of 15 years.

II.3. INTER-BASIN WATER TRANSFER PROJECT (IBWT)

Transfer of part of inflows from the Congo/Oubangui into the Lake Chad is advocated as a means of stopping the drying up of and gradual restoration of its normal level. Lake Chad has shrunk considerably in recent years and is still shrinking. The possibility that this situation will worsen to complete drying up in the near future is envisaged. The consequences on the local economy, especially on the survival of a population of more than 30 000 000 inhabitants who depend on the resources of the lake will be of catastrophic dimensions. To these emerging problems can be added: food insecurity, migrations to neighbouring countries, crimes conflicts and poverty. In consideration of these consequences, the project was launched in Abuja in 1994 at the 8th Summit of Heads of State and Government and accorded as a top priority project. The first stage of the project was the feasibility studies whose cost at early 2 000 estimated was put at 6.07 million US\$. This amount is already contributed by Member States of LCBC.

The feasibility study aims at defining: a) the mean discharge of the transfer and its modulations in compliance with socio- economic constraints; b) method of crossing the divide (ridge) between the two basins of Oubangui and Chari for passage of maximum discharge; c) necessary hydro works to ensure navigation and free flow of Lake Chad water. The feasibility study will also evaluate the navigable canal linking the Logone and Benue through Mayo- Kebbi; d) Environmental Impact Assessment (EIA) and mitigation measures and (e) study of other associated projects to make the IBWT more cost effective.

Benefits of the Oubangui – Chari Water Transfer

The Oubangui – Chari Inter Basin Water Transfer is an answer to the problem of under development, food insecurity and poverty in the West and Central African sub-region by providing unique opportunities for:

- a) Basin-wide joint infrastructure investments that will benefit both the donor basin and recipient basin.
- b) Basin-wide joint sustainable and investment oriented at the regional level in the areas of agriculture, livestock, fisheries, water supply, navigation and power necessary for industrial development.
- c) Bring socio-economic development and benefit-sharing to the Member States of LCBC and the Member States of CICOS
- d) Extending African Integration by economically linking Economic Community of West African States (ECOWAS) and Economic Community of Central African States (ECCAS).

II.4. CALL FOR WATER ACTORS COOPERATION AND NETWORKING.

There is the need for proper coordination of activities of all stake holders on water and water actors i.e. River Basin Organizations, other African Basin Organizations, NGO'S, Civil Societies, including AMCOW, to come up with a forum for exchange of ideas by all water actors in the sub region indeed whole of Africa in order to eliminate duplications. AMCOW can spear head and organize such a forum locally independent of the international fora for water like the World Water Forum.

Call for International Solidarity and Cooperation

Lake Chad which is drying up, the Lake Chad Basin which is drying off, the challenges are enormous for member states to meet them all alone. This is an imminent world disaster which requires International cooperation and solidarity for it to be conquered. This is the appeal that the LCBC is sending to the international community to save Lake Chad, save the environment and its ecosystems and save the lives of close to 30 million inhabitants living in the Lake Chad Conventional Basin. The Lake Chad Basin Commission therefore makes a request as follows:

- That Lake Chad be declared a world ecological patrimony;
- That the international community support the effective implementation of the international campaign to save Lake Chad launched by the Heads of State in 1994;
- That the international community support financially and technically the project for water transfer from Oubangui to Lake Chad after the feasibility study;
- That the international community support financially and technically the execution of SAP and its investment programme.