



United Nations
Educational, Scientific and
Cultural Organization



Applying the transboundary biosphere reserve model to promote peace in the Lake Chad basin through sustainable management of its natural resources

© Ledru et Martel/ Polder irrigation, economy, rural area, Bol village, Lake Chad, Chad

Geographical scope/benefitting country(ies):	Africa (Niger, Chad, Nigeria and Cameroon)
Duration (in months):	48 months
Name and Unit of project Officer	Noëline Raondry Rakotoarisoa, SC/EES
Partner(s) institutions:	Lake Chad Basin Commission, MAB national committees, Ministries in charge of environment and cultural heritage, research institutions and universities, private companies
Total estimated budget inclusive of Programme Support costs	\$US4 800 000

Rationale and background

For the past 30 years, Lake Chad basin has changed significantly due to variation in the rainfall resulting in a significant drop in water level. This has led to loss of biodiversity, and the degradation of the ecosystems. An increase in vulnerability due to erosion has been worsened by deforestation; desertification is also occurring. The region has been affected by armed conflicts for decades. Mass migration of people and their livestock due to the war is accelerated by the environmental changes (climate refugees) and has increased pressure on resources resulting in more conflicts between farmers, herders and fishermen. Lack of sufficient planning in development decisions has led to unsustainable situations (dams and mining operations) which have exacerbated the problem.

Lake Chad basin is facing several challenges including biodiversity conservation, ecosystems management and rehabilitation, scientific knowledge production and sharing, participative planning and governance. Lake Chad is registered on the World Heritage Tentative List of Cameroon, Chad and Niger, showing the importance that countries attach to its preservation. The biosphere reserve (BR) model has proven its relevance in addressing conservation and development issues through an integrated approach especially for transboundary ecosystems such as Lake Chad.

Why UNESCO?

In accordance with its mandate, UNESCO's action in favor of the culture of peace in Africa is important in the framework of its Medium-Term Strategy (2014-2021). The operational strategy for Priority Africa is articulated around six flagship programmes¹ among which flagships 1, 3 and 4 are the most relevant for this project.

In close cooperation with the Lake Chad Basin Commission (LCBC) and other partners from the region and beyond, UNESCO through its International Hydrological Programme (IHP) and Man and Biosphere programme (MAB) has contributed to numerous activities aimed at improving the scientific knowledge base on the lake functioning and environmental status, and developing institutional capacities for the improved management of the lake and its ecosystems.

The issue of preservation of Lake Chad has been discussed between LCBC and UNESCO since 2011, following the Summit of Heads of State and Government of the countries members of the LCBC, which was held on 1 November 2010. One of the recommendations of the Summit was the call for UNESCO to contribute to better management and protection of Lake Chad natural resources. This call was also reiterated by President Idriss Deby of Chad, at several occasions particularly during the 6th World Water Forum in 2012.

In 2013, in close collaboration with LCBC, UNESCO implemented a project entitled « *Diplomatie scientifique et culturelle: "Synthèse / Policy issue review" sur les ressources transfrontalières en Afrique et le cas d'étude du Lac Tchad* ». This project's results were the following:

- (i) Production of a comprehensive desk study aiming at providing evidence for identifying key challenges for management of Lake Chad; this study has been reviewed and enriched during a consultation meeting with stakeholders
- (ii) Production of a Policy Issue Brief based on six key political messages on the management of transboundary hydrological, biological and cultural resources in Lake Chad
- (iii) Enhancement of the capacity of the LCBC and affiliated institutions for water integrated management and cooperation for peace and development; LCBC members were trained in the "From Potential Conflict to Cooperation Potential" process which facilitates multi-level and interdisciplinary dialogues in order to foster

¹ Flagships focus : F1 peace and non violence ; F 2 Education systems ; F 3 STI and knowledge production ; F 4 sustainable management of natural resources and disaster risk reduction ; F 5 culture and peace in a context of regional integration; F6 freedom of expression and media development

peace, cooperation and development related to the management of transboundary water resources. It also focuses on the development of tools for the anticipation, prevention and mitigation of water conflicts.

- (iv) Production of a feasibility study on the establishment of a transboundary biosphere reserve and the Lake's nomination for the World Heritage List; a road map has been agreed by stakeholders during the validation process of this study.

The project concluded that Lake Chad has cultural potential to be listed in the World Heritage list and is relevant to be nominated as transboundary BR within the four main countries bordering the lake: Chad, Cameroon, Niger and Nigeria. Four additional countries—Central African Republic, Algeria, Sudan and Libya—share the lake's watershed and are therefore affected by its slow, steady disappearance and might be part of the transboundary management plan.

Overall Goal/Objective

The project will contribute to the promotion of Culture of Peace in Africa and to the implementation of the Strategic Action Programme for Lake Chad.

It aims at developing an integrated approach for the conservation of biological and cultural diversity and the sustainable management of the natural resources in Lake Chad. It will take advantage of the cooperation between MAB, IHP and World Heritage Centre.

This project will contribute to establish an enabling environment for the wise governance of natural resources supported by sustainable land management schemes including biodiversity conservation areas. Aquatic and terrestrial ecosystems will be rehabilitated as an adaptation measure to climate change. Research has shown that well developed biodiversity businesses have the potential to generate investment for conservation and contribute to sustainable development through the equitable sharing of generated benefits. The project will promote such green economic activities and specific community-based projects related to payment for ecosystem services (PES) which will contribute to poverty alleviation.

Main expected results

- Stakeholders sustainably managed Lake Chad in concordance with its international statutes
 - Lake Chad natural value is internationally recognized
 - Governance of Lake Chad is improved
 - Loss of biodiversity and destruction of ecosystems is decreasing
 - Conflict situations over natural resources are decreasing
- Risk of conflict is decreasing by building institutional capacity of groups of actors
 - The "From Potential Conflicts to Cooperation Potential" stakeholder process is applied in negotiation and decision making
- Knowledge on Lake Chad is improved

- Knowledge on Lake Chad is produced through research programmes promoting interdisciplinary in the natural and social sciences
 - Hydrological and drought monitoring systems are in place
 - Regional network of research teams is strengthened
- Lake Chad ecosystems are rehabilitated
 - Status of ecosystems are assessed
 - Rehabilitation protocols are implemented
- Green economy is promoted in Lake Chad
 - Economic community needs are assessed
 - Socio economic studies on the green economy market are completed
 - Green economy generating activities are in place

Activities and outputs/deliverables relating to the achievement of expected results

The project activities will be implemented at sub-regional and national level as appropriate

ER 1. Stakeholders sustainably managed Lake Chad notably in concordance with its international statutes

Activity 1: Implementation of road map towards international statutes of Lake Chad

- Pursue national and regional consultations
 - a. To agree on areas for activities compatible with conservation, including rehabilitation of ecosystems
 - b. To agree on areas dedicated to development activities, including transhumance areas
- Facilitate the emergence of multistakeholders governance structures for sustainable use of Lake Chad by strengthening existing structures such as the NGO forum of Lake Chad Basin
- Develop a consensual transboundary development and management plan for Lake Chad based on the BR model and its zonation concept. It will include World Heritage sites as appropriate
- Strengthen the existing programmes to develop a multi-year intersectoral and multidisciplinary research and monitoring programme, especially for biological, hydrological resources and drought monitoring
- Information and awareness raising activities on topics related to conservation, desertification, climate change, water issues
- Trainings on From Potential Conflicts to Cooperation Potential stakeholder process for all key groups of stakeholders

ER 2. Knowledge on Lake Chad is updated

Activity 2: Support implementation of research and monitoring programmes

- Carry out an in-depth assessment of the state of conservation, the socio-economic situation (especially the movement of populations) and the cultural features of Lake

Chad, including thematic maps, in the view of its inscription on the World Heritage List and the establishment of a transboundary BR

- Update priority areas for conservation through biological inventories
- Update knowledge on Lac chad hydrological system

ER 3. Lake Chad ecosystems are rehabilitated

Activity 3: Support rehabilitation of ecosystems through community-based utilization of green technologies

- Rehabilitation of aquatic and terrestrial ecosystems :
 - a. identification of green technologies for rehabilitation of ecosystems including traditional practices
 - b. Training on green rehabilitation technologies
 - c. Social organization of communities to implement rehabilitation programmes
 - d. Establishment of nurseries and gene banks at community level

ER 4. Green economy is promoted in Lake Chad

Activity 4: Support the establishment of green income-generating activities

- Support to the establishment of green income-generating activities involving private sector
- Support to the identification and implementation of PES projects

Beneficiaries and stakeholders

This project has a wide range of beneficiaries. At local level, communities living in the Lake Chad area will be the primary beneficiaries. The project will reinforce the institutional mandate of the LCBC and will foster research activities by promoting research cooperation and monitoring at regional level. The multistakeholder type of governance will benefit the full range of actors and will promote peace through an equitable sharing of natural resources. Through this project, governments will contribute to fulfill their engagement with regards to Multilateral Environmental Agreements such as CDB, UNFCCC and/or UNCCD.

Implementation strategy

This project will require extensive partnership. At regional level, the main partner will be the LCBC, while at national level they will be national government entities (line Ministries in charge of environment and natural resources, water and mining, planning, development, etc.), MAB national committees, local government and authorities, civil society including community-based organizations and NGOs, as well as the private sector.

For research activities, an intersectoral and multidisciplinary approach will be applied involving relevant UNESCO scientific and educational programmes (MAB, International Geoscience Programme, IHP, and Education for Sustainable Development) in partnership with national, regional and international research institutions. This will be framed in South-South and South-North-South cooperation agreements.

Green income-generating activities will be fostered by the establishment of small revolving loans at community level in partnership with financial institutions.

Partnership will be enhanced between all stakeholders by facilitating an enabling environment for dialogue. This will lead to the emergence of new multistakeholder governance structures or the strengthening of existing structures, as appropriate, both at regional (involving CBLT) and national level. Special attention will be given to building the institutional capacity of the countries to manage their national BR.

Capacity building and empowerment of local communities to manage their environment sustainably will be fostered in order to obtain a critical mass for change. In this regard, local and indigenous knowledge will be valorized as appropriate.

Issues related to gender, women, youth, indigenous people and disadvantaged populations will be specifically looked at in all aspects of the project.

Sustainability and exit strategy

This project is built upon the results of consultation with various stakeholders which is a basic means of sustaining projects by actively promoting stakeholder or beneficiary ownership of the project.

In order to ensure sustainability of activities, outputs and results, project beneficiaries will be trained to acquire skills and knowledge required to sustain the project results.

Involvement of the private sector in the green business scheme will be an asset to sustain trade.

Finally, the link between sustainable development and the conservation of the natural resource base will become the day-to-day life of the community which will be actively educated and sensitized to the MAB principles and BR sustainable management principles.

International recognition of the natural Lake Value of Lake Chad will be critical for its preservation and it should be a permanent source of income through tourism if security issues can be fixed.