GLOBAL ENVIRONMENT FACILITY
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Naoko Ishii
CEO and Chairperson

March 15, 2017

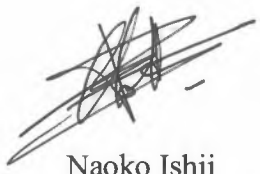
Dear Council Member:

AfDB as the Implementing Agency for the project entitled: ***Regional (Central African Republic, Cameroon, Niger, Nigeria, Chad): Regional Project for the Conservation and Sustainable Development of Lake Chad: Enhancing Transboundary Cooperation and Integrated Water Resources Management in the Lake Chad Basin*** *under the Regional: LCB-NREE: Lake Chad Basin Regional Program for the Conservation and Sustainable Use of Natural Resources and Energy Efficiency (PROGRAM)*, has submitted the attached proposed project document for CEO endorsement prior to final approval of the project document in accordance with AfDB procedures.

The Secretariat has reviewed the project document. It is consistent with the proposal approved by Council in November 10, 2011 and the proposed project remains consistent with the Instrument and GEF policies and procedures. The attached explanation prepared by AfDB satisfactorily details how Council's comments and those of the STAP have been addressed. I am, therefore, endorsing the project document.

We have today posted the proposed project document on the GEF website at www.TheGEF.org. If you do not have access to the Web, you may request the local field office of UNDP or the World Bank to download the document for you. Alternatively, you may request a copy of the document from the Secretariat. If you make such a request, please confirm for us your current mailing address.

Sincerely,



Naoko Ishii
c/o Chief Executive Officer and Chairperson

Attachment: GEFSEC Project Review Document
Copy to: Country Operational Focal Point, GEF Agencies, STAP, Trustee

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REQUEST FOR CEO ENDORSEMENT

PROJECT TYPE: Full-sized Project
TYPE OF TRUST FUND:GEF Trust Fund

For more information about GEF, visit TheGEF.org

PART I: PROJECT INFORMATION

Project Title: LCB-NREE IW child project: Regional project for the conservation and sustainable development of Lake Chad: enhancing transboundary cooperation and integrated water resources management in the Lake Chad Basin			
Country(ies):	Regional: Cameroon, Chad, Nigeria, Niger, Central African Republic	GEF Project ID:[1]	9446
GEF Agency(ies):	AfDB (select) (select)	GEF Agency Project ID:	P-Z1-CZ0-001
Other Executing Partner(s):	Lake Chad Basin Commission (LCBC)	Submission Date:	15.03.2016
GEF Focal Area (s):	International Waters	Project Duration(Months)	60
Name of Parent Program (if applicable): ➢ For SFM/REDD+ ☐ ➢ For SGP ☐ ➢ For PPP ☐	Lake Chad Basin Regional Program for the Conservation and Sustainable Use of Natural Resources and Energy Efficiency (LCB-NREE) (GEFID 4680)	Project Agency Fee ($):	502,963

A. FOCAL AREA STRATEGY FRAMEWORK[2]

Focal Area Objectives	Expected FA Outcomes	Expected FA Outputs	Trust Fund	Grant Amount ($)	Cofinancing ($)
IW-1 (select)	Outcome 1.1: Implementation of agreed Strategic Action Programmes (SAPs) incorporates transboundary IWRM principles (including environment and groundwater) and policy/ legal/institutional reforms into national/local plans	Output 1.2 Cooperation frameworks agreed with sustainable financing identified Output 1.3 Types of technologies and measures implemented in local demonstrations and investments Output 1.4 Enhanced capacity for issues of climatic variability and change and groundwater management	GEF TF	6,287,037	30,150,000
		Total project costs		6,287,037	30,150,000

B. PROJECT FRAMEWORK

Project Objective: To strengthen natural resources management and cooperation in the Lake Chad basin to support IWRM for the benefit of basin conservation and the resilience of ecosystems and communities

Project Component	Grant Type	Expected Outcomes	Expected Outputs	Trust Fund	Grant Amount ($)	Confirmed Cofinancing ($)
1. Strengthening capacity, institutions and cooperation for IWRM in the Lake Chad basin	TA	1.1 Regional capacity to manage and monitor transboundary resources based on IWRM enhanced with added considerations	1.1.1 Capacity building of LCBC operations and management staff on IWRM and ecosystem-based approaches (3 trainings/year) 1.1.2 A system of regular	GEF TF	2,276,248	11,428,082

[1] Project ID number will be assigned by GEFSEC.
[2] Refer to the Focal Area Results Framework and LDCF/SCCF Framework when completing Table A.

		for climate change and variability	quantitative and qualitative monitoring of basin surface and groundwater resources, based on hydro-meteorological stations and aquifer observation networks (which will be rehabilitated/installed by the baseline project) (in cooperation with UNDP and BGR) 1.1.3 An alert/early warning system for drought established, building on the hydro- and agro-meteorological surveillance networks and climate forecasting (linked to basin-wide communication strategy and tools prepared under component 3)			
		1.2 Reinforced LCBC and national agencies on regulatory and enabling aspects enhance SAP/ Water Charter implementation and ecosystem-based management	1.2.1 Training of 5 national water bodies on SAP/Water Charter implementation and specialized aspects of ecosystem-based planning 1.2.2 LCBC staff (50) trained on various aspects of organizational development; strategic planning; information management; financial and project management, building on GIZ's organizational advisory services 1.2.3 Number of new countries having ratified the Water Charter			
		1.3 Ensuring and sustaining stakeholder collaboration through improved coordination and planning	1.3.1 A coordination platform strengthened within the LCBC to ensure donor/partner collaboration and synergy for a more streamlined implementation of the SAP and the Lake Chad development and climate resilience action plan (LCDAP): support to the Donor Advisory Committee and the International Cooperation Division under the new LCBC organogram (in collaboration with UNDP) 1.3.2 LCBC Five Year Investment Plan (FYIP) beyond 2017, in cooperation with UNDP and GIZ 1.3.3 A tracking system developed to continuously monitor the status of SAP/FYIP implementation			
2. Pilot demonstrations of technologies and practices in water	Inv	2.1 IWRM and sustainability incorporated into productive landscapes	2.1.1 2 on the ground pilots, one in Nigeria and one in Chad, on innovative water saving techniques (drip irrigation and water	GEF TF	1,000,000	9,107,633

use efficiency and conservation		through pilot water saving demonstrations engaging local stakeholders	harvesting): technologies improve water use efficiency and access, rehabilitate landscapes and deliver tangible benefits for livelihoods at local level 2.1.2 Training of beneficiaries in two pilot sites to strengthen community capacities in water and soil conservation, and land use planning 2.1.3 Knowledge sharing, field visits, and demonstrational training of local officials and other stakeholders to the sites 2.1.4 Pilot techniques, with strong potential for replication and climate adaptation, are scaled up by the national child projects of the LCB-NREE program following assessment of effectiveness			
3. Improving and consolidating knowledge, data and monitoring	TA	3.1 LCBC Observatory information systems enhanced, with data quantity, quality and harmonization improved, to facilitate use at regional and national scales	3.1.1 Assessment of data and information gaps to determine the basin and Observatory's needs 3.1.2 Methods developed for standardization and harmonization of regional and national data collection, clearing and processing: the LCBC data exchange agreement is efficiently applied by countries, with systematic data gathering feeding the Lake Chad regional database and Observatory information system 3.1.3 A basin surveillance program of regular ecological and socio-economic audits, based on simple indicators, to monitor status of biodiversity, livelihoods, and response measures (support, particularly with quantitative data, to the LCBC Annual Monitoring Review and State of the Basin reports) 3.1.4 ICT-based models used to monitor changes in water flow and lake levels, and also simulate and assess impact under various scenarios, including climate change (e.g. reduced rainfall, higher temperatures, population growth, lake contamination)	GEF TF	2,696,437	8,114,285
		3.2 The LCBC Observatory and	3.2.1 Observatory staff expertise improved through 10 trainings in			

		national agencies with enhanced expertise to better address basin challenges	data collection, processing, distribution and archiving methods; GIS; remote sensing; etc. 3.2.2 LCBC technical staff (30) trained on water and environmental monitoring techniques 3.2.3 National agency staff expertise improved through 10 trainings in data collection methods and on the value of information sharing 3.2.4 LCBC staff trained in reporting and M&E techniques based on results based management approaches (2 trainings/year)			
		3.3 Enhanced knowledge sharing and public awareness fosters wider participation in SAP implementation, scales up good practices, and catalyzes understanding of IWRM for benefits sharing	3.3.1 A communication strategy, with focus on radio, to disseminate regular basin-relevant information nationally and locally (such as on impending drought), integrated with the early warning system and UNDP's emergency response plans 3.3.2 Basin technical committees, water resource user or sectoral expert fora occur regularly for information sharing (2/year) 3.3.3 M&E framework developed and applied to monitor project-related SAP implementation progress, for adaptive management, partner synergy and ecological effectiveness (including joint annual monitoring missions of GEF IW projects) 3.3.4 Transfer of lessons, experiences and best practices on IWRM through communication tools (including policy briefs), technical forums, site visits, etc. as part of effort to influence national reforms 3.3.5 Allocation of 1% of project budget for IWLEARN activities (at least two IW experience notes, participation in IW meetings, etc.)			
				Subtotal		5,972,685	28,650,000
				Project management Cost (PMC)[3]	GEF TF	314,352	1,500,000
				Total project costs		6,287,037	30,150,000

[3] PMC should be charged proportionately to focal areas based on focal area project grant amount in Table D below.

C. SOURCES OF CONFIRMED COFINANCING FOR THE PROJECT BY SOURCE AND BY NAME ($)

Please include letters confirming cofinancing for the project with this form

Sources of Co-financing	Name of Co-financier (source)	Type of Cofinancing	Cofinancing Amount ($)
GEF Agency	AfDB	Soft Loan	30,150,000
Total Co-financing			30,150,000

D. TRUST FUND RESOURCES REQUESTED BY AGENCY, FOCAL AREA AND COUNTRY[1]

GEF Agency	Type of Trust Fund	Focal Area	Country Name/ Global	(in $)		
				Grant Amount (a)	Agency Fee (b)[2]	Total c=a+b
AfDB	GEF TF	International Waters	Regional	6,287,037	502,963	6,790,000
Total Grant Resources				6,287,037	502,963	6,790,000

[1] In case of a single focal area, single country, single GEF Agency project, and single trust fund project, no need to provide information for this table. PMC amount from Table B should be included proportionately to the focal area amount in this table.

[2] Indicate fees related to this project.

F. CONSULTANTS WORKING FOR TECHNICAL ASSISTANCE COMPONENTS:

Component	Grant Amount ($)	Cofinancing ($)	Project Total ($)
International Consultants	660,000	1,250,000	1,910,000
National/Local Consultants	150,000	400,000	550,000

G. DOES THE PROJECT INCLUDE A "NON-GRANT" INSTRUMENT? No

(If non-grant instruments are used, provide in Annex D an indicative calendar of expected reflows to your Agency and to the GEF/LDCF/SCCF/NPIF Trust Fund).

PART II: PROJECT JUSTIFICATION

A. DESCRIBE ANY CHANGES IN ALIGNMENT WITH THE PROJECT DESIGN OF THE ORIGINAL PIF[4]

A.1. National strategies and plans or reports and assessments under relevant conventions, if applicable, i.e. NAPAS, NAPs, NBSAPs, national communications, TNAs, NCSA, NIPs, PRSPs, NPFE, Biennial Update Reports, etc.

The original LCB-NREE PFD had used the AfDB project 'Lake Chad Basin Sustainable Development Program (PRODEBALT)' as its baseline. The main change between the LCB-NREE PFD and the CEO endorsement documents is a change in baseline project from the PRODEBALT to the 'Multinational Program to Rehabilitate and Strengthen the Resilience of Lake Chad Basin Systems (PRESIBALT)'. PRESIBALT was approved by the AfDB Board in January 2015 as a subsequent phase of the PRODEBALT and builds upon its lessons and interventions. A change in baseline project and the time passed since preparation of the PFD (four years) necessitate an update in child project alignment to regional and national strategies, plans, and relevant reports.

Based on the findings of the Transboundary Diagnostic Analysis (TDA), a Strategic Action Program (SAP) was completed in 2008 as a regional framework for the Lake Chad Basin to address seven priority regional environmental concerns as identified in the TDA. The SAP identifies five regionally agreed Ecosystem Quality and Water Resource Objectives (EQWROs):

1. Improved quantity and quality of water in the Lake Chad Basin.
2. Restoration, conservation and sustainable use of bio-resources in the Lake Chad Basin.

[4] For questions A.1–A.7 in Part II, if there are no changes since PIF and if not specifically requested in the review sheet at PIF stage, then no need to respond, please enter "NA" after the respective question.

3. Conservation of biodiversity in the Lake Chad Basin.
4. Restoration and preservation of ecosystem resources in the Lake Chad Basin.
5. Strengthened participation and capacity of stakeholders and institutional and legal frameworks for environmental stewardship for the Lake Chad Basin.

The new AfDB baseline project, PRESIBALT, is the natural follow up to the PRODEBALT. PRESIBALT is also fully consistent with the 2025 Vision of the Lake Chad Basin Commission (LCBC) - a vision which calls for international cooperation to safeguard Lake Chad and on sustainable development guided by the SAP. With its underlying aims to ensure integrated management of water resources, preserve the basin's productive and ecological functions, and improve food security and livelihoods, the GEF program is fully aligned with the SAP, continues its implementation, targets the priority regional concerns as expressed in the TDA, and is itself guided by the 2025 Vision. The regional project of the LCB-NREE will specifically implement a number of interventions related to each EQWRO, with a strong focus on #5 given its prime link to the International Waters (IW) focal area objective 1 ('Catalyze multi-state cooperation to balance conflicting water uses in transboundary surface and groundwater basins while considering climatic variability and change'). In addition to strengthening regional coordination, capacity and institutional frameworks, the implementation of the SAP is sought through technologies and measures to be applied in local demonstrations for the restoration and preservation of basin ecosystem services, which will form main elements of the PRESIBALT and its GEF activities. Each of the program components in child project Table B's contribute directly to the SAP EQWROs, either in terms of strengthened multi-state cooperation and capacity, or of sustainability investments. The LCB-NREE program and each of its child projects will be implemented as part of the PRESIBALT and incremental GEF activities will be fully integrated within the baseline itself. Together, AfDB and GEF support will focus on specific issues to improve and sustain regional and national governance of the Lake Chad basin, IWRM, institutional strengthening, monitoring and data, demonstrations (to illustrate the benefits of IWRM and innovative water saving measures at local level for scale-up) and livelihood interventions which reduce pressure on basin resources and ecosystems.

Importantly, GIZ will soon be revising the Lake Chad TDA, while UNDP will subsequently work on updating the SAP as a task under its own GEF IW project for Lake Chad.[5] These are expected to be produced in 2016-2017. The updated SAP will likely involve supplementary annexes but will nonetheless remain fully aligned to the Vision which remains the overall strategic guiding framework. The updated SAP will continue to focus on the reversal of current ecosystem degradation trends in the Lake Chad basin, the enabling framework for the integrated management of natural resources, and on the sustainable conservation of basin resources to ensure ecological services and economic security. The new annexes will cover topics of rising concern in the basin, such as climate change, with greater attention on the development needs of the basin populations. The AfDB baseline is fully supportive given its stated objective to build the resilience of socio-ecological systems for sustainable and inclusive development in the Lake Chad Basin. The GEF project under PRESIBALT will retain flexibility to better align with the priorities of the updated SAP once this has been finalized, and will make sure to carefully coordinate with UNDP and GIZ on this.

Since the submission of the PFD in 2011, a Lake Chad Water Charter has been prepared and adopted by three riparian countries (Cameroon, Chad, and Niger). The Charter constitutes a binding framework for the sustainable development of Lake Chad by means of integrated, equitable, coordinated management of the Basin's shared water resources and environment. The framework promotes good governance, sub-regional cooperation and solidarity based on the common interests of the Member States. Ratification is on-going and the task now is to make the Charter's provisions effective. The project will help to fully operationalize and facilitate application of the Charter which has been carefully analyzed and served as a guide to establish key gaps for targeting and activities for this GEF project.

To operationalize the SAP, the 2025 Vision and their related objectives, a Five-year Investment Plan (FYIP) was adopted by the LCBC in 2012 for its implementation for the period 2013-2017. The FYIP is in line with key LCBC strategic documents, including the SAP and associated National Action Plans (NAPs), and is divided into three components and fourteen (14) programs. Each component is meant to cover specific SAP objectives. PRESIBALT and the GEF activities have been designed to directly contribute to the SAP and FYIP.

[5] Initially, GIZ was intended to update the SAP. This new division of tasks was discussed and approved at a donor coordination meeting at GIZ headquarters near Frankfurt on 22 February 2016, based on better alignment and timing issues.

During the IW project preparation phase, a mapping exercise was initiated with partners (mainly UNDP) to clearly display how the different initiatives relate to the SAP, FYIP, and amongst each other. The map shows how together the different projects strengthen joint monitoring and management capacity of the LCBC and member states, and facilitates alignment and collaboration. This map (considered a work in progress) can be found as an annex, and can be updated as needed.

By creating conditions that stimulate the preservation of Lake Chad for multiple purposes, PRESIBALT and the IW funded activities support the SAP, TDA, Water Charter, NAPs, FYIP, the agricultural and environmental policies of ECOWAS and ECCAS, and international agreements on wetlands (RAMSAR), climate change (UNFCCC), biodiversity (CBD), land degradation (UNCCD), and the Code of Conduct for Responsible Fisheries (CCRF). NAP and NAPA priorities have guided the selection of demonstrations at local level that will form part of the IW intervention, and which will be scaled up with the national STAR funded projects. By supporting the LCBC and the five member states, the AfDB-GEF program will also contribute to a number of the Sustainable Development Goals (SDGs), in particular SDG 1, 2, 5, 6, 7, 13 and 15, and help countries in their reporting requirements.

PRESIBALT is also aligned with the AfDB Ten-year Strategy, which emphasizes green and inclusive growth, the Bank's 2014-2019 strategy for addressing fragility and strengthening resilience, and objectives of the 2011-2015 Action Plan on Climate Change. At country level, PRESIBALT is consistent with the AfDB's operational strategies and country strategy papers in the five countries concerned, as previously described in the PFD. In order to reflect the program implementation risks arising out of existing or potential instabilities, an analysis of fragility in each of the countries of the Lake Chad basin (Chad, CAR, Cameroon, Niger and Nigeria) has been conducted under the auspices of the AfDB Transition Support Department.

A.2. GEF focal area and/or fund(s) strategies, eligibility criteria and priorities.

The GEF financed LCB-NREE program will build on the baseline PRESIBALT and address additional enabling conditions for the collective management of the Lake Chad transboundary water system and actions towards the sustainable and integrated management of basin natural resources. The four over-arching components as were expressed in the PFD are still relevant to guide the program and child projects despite the baseline change:
Component 1: Increase efficiency of approaches and tools related to the consumption of natural resources and energy to bring GEBs;
Component 2: Incorporate sustainability in productive landscapes;
Component 3: Strengthening capacity and knowledge and sustainable financing for climate resilient mobilization for IWRM and WUE in the Lake Chad basin;
Component 4: Strengthening of water and ecosystems management and riparian collaboration.

Interventions falling within these four original PFD components have been elaborated into six child projects, one regional and five national. The five projects at national level are primarily focused on reducing and reversing land degradation and deforestation, conserving basin biodiversity, and promoting renewable and low carbon energy alternatives that reduce pressure on ecosystems. The regional project, which falls fully under the GEF5 IW strategy, is based on improving basin-wide governance and sustainability of basin ecosystem services, and promoting multi-state cooperation of this transboundary lake. The activities that were outlined in the PFD to meet the expected outcomes of the program and GEF focal area strategies were meant to give an initial explanation of incrementalism. As a PFD, therefore, they were intrinsically more general and additional work was required at child project preparation stage to define specific activities, measures and related on-the-ground investments. As such, the six full-sized child projects comprising the program have been developed. The CEO endorsement documents each necessitate deeper explanations of their project's own eligibility, incremental aspects and detailed activities.

Designed to generate environmental benefits through enhanced transboundary basin management and comprehensive participation of stakeholders in balancing conflicting water and resource uses, the regional project is fully aligned with the GEF5 IW strategy, and specifically IW-1. Objective 1 relates to GEF assistance for implementing agreed SAPs and interventions in cross-border surface and groundwater basins. The regional IW project is thus designed to primarily contribute to the implementation of the Lake Chad SAP, focusing on IWRM, water use efficiency, climatic resilience,

the sustainable use and maintenance of aquatic and ecosystem services, and enhancing coordination and institutional capacity of regional and national actors, particularly of the LCBC for a more effective implementation of its critical mandate. Activities have been selected taking into consideration the SAP, actions by other partners since PFD submission, agreed frameworks such as the Water Charter, and feedback by GEF and STAP following PFD submission. The general drive and underlying objectives remain the same as the PFD, but major changes are implicit within the specificity of the CEO endorsement documents.

In alignment with the IW strategy, the project will be undertaking considerable efforts towards capacity building and technical assistance for IWRM. Activities target primarily IW-1 associated outcomes 1.1, 1.3 and 1.4 (no change from the PFD). This will be achieved through enhanced sustainability and environmental impact of the baseline project by promoting improved transboundary management practices that will generate global benefits as well as local environmental benefits, technical and institutional capacity building (1.1, 1.3, 1.4); improved cooperation at basin level for environment and groundwater amongst various stakeholders (1.1); enhanced capacity for addressing climatic variability/change and groundwater management (1.4); and the integration of transboundary IWRM aspects (based on a larger landscape and adaptive management approach) in planning and managing the Lake Chad basin (1.1, 1.4). Pilot demonstrations (1.3) on water use efficiency and water saving techniques will complete the IW investment, focusing on the importance of preserving aquatic and other natural resources for the benefit of both the environment and livelihoods. The idea is to then upscale these pilots as part of national child project implementation, building on successful techniques. The pilots will thus create transformative linkages with national child project interventions in sustainable land and water management practices, SFM, and biodiversity conservation as planned under the programmatic approach. In addition to IW funding for a regional umbrella perspective, the five Lake Chad basin countries will contribute GEF resources from various focal areas (LD, BD, CCM, and SFM) for their child projects, reflecting strong efforts for regional scale-up and transformation. Their stress reduction measures will be critical as protective actions for ecosystems within a regional transboundary system.

The LCB-NREE is a regional priority due to the transboundary nature of the basin and the need for a concerted effort to address the challenges being faced in conserving water and ecosystems while also ensuring food security for the basin populations. The long-term objective of the GEF project will be to achieve global environmental benefits through integrated sustained management of land and water resources. The specific purpose of the project is to overcome barriers to the effective transboundary management of the lake and its basin, as examined in the TDA, by enhancing collaboration, capacity and action among riparian states and stakeholders. The project contributes to the IW goal also by promoting knowledge, including on the links and interdependencies between water uses (agriculture, surface and groundwater, biodiversity, etc.), climate, and livelihoods. A primary purpose of the IW component of the LCB-NREE is to build capacity within the LCBC to improve its effectiveness as the regional IWRM body, its enforcement capacity, and to demonstrate successful interventions within countries for potential scale up. The LCBC will be the prime executing agency with a clear role in project implementation, much needed for its own institutional strengthening and ownership, and a strong focus on data and knowledge generation for a more effective decision-making process.

The long-term goal of the baseline and its GEF incremental activities is to realize local and global benefits through actions that help sustain the integrity of the Lake basin and its ecosystem services, underlined by a concern for climate resilience and poverty alleviation. The aim is a stronger trend towards sustainable management, regeneration and ecological stability of Sahelian ecosystems, which in turn support rural development, food security and regional stability. Such a goal necessitates both a national and regional approach that considers the lake landscape and a working governance system needed for collective decision-making, information management, and benefit-gaining in both development and conservation aspects. It also necessitates a theory of change approach to achieve desired long-term goals. Measures will target the barriers to such a system and build knowledge and capacity at local, national, and regional levels for adaptive management in the face of impending change and growing resource scarcity. Adaptive capacity needs to address socio-economic, demographic, climatic, political, security, environmental, etc. pressures and risks that face the basin, and their responsibility in resource depletion. Given the fragility of the Sahelian landscape, the role of Lake Chad as an oasis within a dryland, and rising regional security concerns, it is ever more critical to secure this ecosystem for all the benefits it brings, environmentally and socio-economically.

A.3. The GEF Agency's comparative advantage:

The AfDB has a strong portfolio in the Lake Chad region in line with regional priorities, sector strategies in the different countries and country strategy papers. The AfDB has financed several regional and country-level operations. The regional operations include: (i) Lake Chad Sustainable Development Program (PRODEBALT); (ii) the Water Charter Project financed by the African Water Facility (AWF); (iii) the Pilot Research/Development Support Project on Integrated Pest Management (IPM) for Subsistence Farming in the Lake Chad Basin; (iv) the Support Project to Lake Chad Basin Initiative for the Reduction of Vulnerability and Risks related to STIs/HIV/AIDS (LCBCI); and (v) the Central Africa Biodiversity Conservation Program - Protection of Elephants. Furthermore, the Bank has financed several ecosystem based and transboundary operations including: (i) Silt Control in the Niger River Basin; (ii) Lake Tanganyika Integrated Regional Development Program (PRODAP); (iii) the Project to Restore the Ecological and Economic Functions of Lake Guiers in Senegal; (iv) Multinational Lakes Edward & Albert Integrated Fisheries and Water Resources Management Project, with a GEF component; and (v) other resilience interventions for the Horn of Africa and the Sahel, primarily the Program to Build Resilience to Food and Nutrition Insecurity in the Sahel (P2RS).

The AfDB is considered a lead technical and financial partner for Lake Chad and is entrusted with mobilizing resources required for the implementation of the LCBC 2013-2017 FYIP. PRESIBALT and the GEF program will advance the Bank's leadership in the drive to address fragilities in the Lake Chad basin, promote inclusive development by facilitating a coordinated management of water resources, and safeguard Lake Chad over the long-run. The said water resources are the main factors of production locally, the interactions of which generate an array of services indispensable to the communities and basin health. In addition to protecting a world heritage, the Bank's value added lies in consolidating outcomes of past operations, specifically by continuing activities in water governance, silt control and agricultural land rehabilitation, and applying lessons learned during the implementation of previous programs. By addressing the sustained management of basin resources as well as regional integration, PRESIBALT addresses community vulnerability, agriculture, food security, and climate change issues. The LCB-NREE child projects will be implemented as part of the PRESIBALT and GEF activities will be integrated within the baseline project execution.

PRESIBALT enables the AfDB to extend its support to resilience building and the reduction of fragility in Africa, strengthening ongoing operations in the Sahel. The program supports and complements the actions of PRODEBALT and the AWF by implementing the guidelines and feasibility studies prepared previously, such as those aimed at checking silting and water erosion, and the Water Charter itself. The AfDB intervention will serve as a means for strengthening institutional dialogue with the countries and other partners at regional level. The main challenges presented in the supervision and completion reports of projects implemented with the LCBC are related to: LCBC's limited capacities to execute projects directly, lengthy procurement time frames, and the slow pace of implementation of activities on the ground. Due regard has also been paid to lessons learned during performance reviews of the Bank's multinational operations including: (i) development and floodplain options stemming from pilot tests conducted in the Waza-Logone plain; (ii) technical silt/erosion control and soil restoration measures experimented during PRODEBALT and the Niger Project; (iii) need for an institutional arrangement to ensure effective implementation of a multinational operation in coordination with States; (iv) choice of procurement methods based on the nature of activities and type of operators in the project area; and (v) mobilization of counterpart contributions, gender mainstreaming and performance monitoring. These have informed the design of PRESIBALT and will be given strong consideration during its implementation for improvements. The AfDB is thus in an ideal position to assimilate knowledge from interventions past and continue the momentum for SAP/FYIP/NAP operationalization.

The PRESIBALT and GEF program design reflect lessons learned during the above-mentioned operations and also those of other stakeholders such as GIZ, BGR, UNDP, World Bank and IUCN in the region. An experience learning and adaptive approach will continue throughout the new project, due to new realities and actions on the ground in the past years and currently on-going. There is ever stronger interest of the AfDB in the Sahel, given its extreme fragility and regional insecurities, and Lake Chad itself. As such, the AfDB is well suited to such a program and to help ensure sustainability of basin interventions and alignment with strategies for the basin.

At the regional level, LCBC staff will be reinforced to ensure the sound implementation of the regional and child projects. At country level, project offices will be opened to coordinate the implementation of activities, working closely with state services. The availability of AfDB field offices in the region (Nigeria, Cameroon, and Chad) will be an additional support to the implementing actors. Regular AfDB monitoring, including a mid-term supervision mission that helps address and correct issues, allows to retain flexibility as needed.

A.4. The baseline project and the problem that it seeks to address:

Given delays in project preparation, the AfDB baseline for this GEF intervention has changed. The primary change between the PFD and its CEO endorsement documents is therefore a change in baseline project from PRODEBALT to PRESIBALT. PRODEBALT followed from a previous UNDP-World Bank-GEF project entitled 'Reversal of Land and Water Degradation Trends in the Lake Chad Basin Ecosystem' under which both the TDA and SAP were prepared. PRODEBALT was the first major project focused on the initial implementation of the SAP. PRESIBALT follows directly from the PRODEBALT as a successive phase and builds upon its lessons and interventions. Furthermore, additional donor and partner interventions and assessments (even scientific)[6] since the preparation of the PFD have altered some realities on the ground, changing the overall baseline context, and thus requiring a rethinking or revision of envisioned activities in order to build on interventions and progress by avoiding duplication. Nonetheless, the LCB-NREE program objectives and overall guiding components as provided in the PFD remain fully relevant with the new baseline. The detailing of project activities underscores the child projects.

PRODEBALT was originally conceived in response to observed reductions of water flows and quality, loss of biodiversity, and erosion and siltation problems which affect Lake Chad. Progress was made in aspects related to soil restoration, erosion control, removal of invasive plant species, channel rehabilitation, agroforestry, local biodiversity conservation (e.g. kouri cattle), fish preservation, and income generation activities (reference can be made to the PRODEBALT completion report). PRESIBALT will apply lessons learned from PRODEBALT, thereby stepping up successful interventions, making revisions where needed, and increasing effectiveness of outcomes and LCBC project management. PRESIBALT is the natural continuation, still coherent with the SAP and Vision 2025, and with the stated objective to better socio-ecological conditions in the region for improving resilience and sustained inclusive development. PRESIBALT has the added urgency of improving the local socio-economic context given security concerns in the region from Boko Haram.

The continued degradation of the fluvio-lacustrine productive systems of the Lake Chad basin and an increase in local poverty, vulnerability and regional insecurity have mobilized the international community to take more action on Lake Chad in order to reverse current degradation trends. Various interventions have been planned, including large infrastructure projects such as the Water Transfer Project from the Ubangi River to Lake Chad. However, potential environmental and social consequences of such large interventions, in addition to their high costs, underline the extreme necessity, as a first step, to search for a better utilization of available water resources and protection of the basin resources, which will enhance productivity of existing lands. Such an approach reaffirms the need for an integration of regional and national socio-economic needs concurrently with environmental needs based on transboundary considerations.

For over fifty years, the LCBC has been working to promote sustainable and shared management of environmental resources in the basin. Various actions have been undertaken to identify effective interventions in line with the Vision 2025. However, many challenges still persist. In particular, as highlighted in the Water Charter and recent technical assessments[7], the rainfall and hydraulic flow conditions in the tributaries of Lake Chad are extremely variable and likely to be increasingly negatively affected by climate change. The lake water balance and its water level variations mainly depend on rainfall and inflow, and an uncontrolled increase in abstractions could cause significant impact and further reduce the volume and surface area of the Lake. Basin ecosystems are very sensitive to these variations in inflows and pollutant discharge, and face serious degradation risks, consequently increasingly threatening the services they render to the environment and human livelihoods. Inadequate availability and exchange of information also limit knowledge and reduce the effective collective management of surface and groundwater resources.

Lake Chad is the focus of increasing international attention, in a context where sustainable development and climate change challenges strongly interact. An expert group review, supervised by L'Institut de Recherche pour le

[6] Lemoalle J., Magrin G., Development of Lake Chad: current situation and possible outcomes. Marseille, IRD Editions, Expert group review collection, 2014; Joint Environmental Audit of the Drying up of Lake Chad, GIZ, 2015; Africa Supraregional: Adaptation to Climate Change in the Lake Chad Basin: Climate Change Study, GIZ, 2015; Groundwater needs assessment: Lake Chad Basin, BGR, 2012.

[7] IRD, GIZ

Développement (IRD) and prepared at the request of the LCBC (2014), was recently conducted to provide a consolidated summary of available data and scientific and technical knowledge on the current situation of Lake Chad and its basin. According to the study, the Lake's situation suffers from a muddled image due to strong water and environmental variability, and by the political sharing of the transboundary network among four countries. Uncertainty concerns the hydrological analysis of the Lake (e.g. surface area extension, whether or not it is drying up), the potential impacts of climate change on the Lake and basin, the population affected by variations in water levels, and the degree of environmental degradation and biodiversity loss being experienced in the region. The study draws some conclusions about the hydrological and environmental situation, and draws some operational and policy oriented recommendations. These have also informed this GEF project preparation.

At its latitude and due to the semi-arid or arid climate within which it is located, the basin's water system relies on water supplied by rivers which drain southern catchment areas with a wetter climate. Lake Chad is known for being highly variable at every time scale (seasonal, decennial, geological, etc.), a variability which reflects that of rainfall in the upstream basin. The Lake occupies a low and particularly flat part of the Chad basin; as such, any variation in the water level causes considerable changes to the landscape and to flooded areas.

Lake Chad is made up of two basins - one north and one south - that are separated by a shallow mid-section called the 'Great Barrier'. The Chari River coming from Chad is the primary inflow of the southern basin. The rest of the Lake's water comes from direct rainfall and a number of smaller tributaries, including the Komadogu-Yobe in the northwest (Nigeria). During wet periods, the Lake's water level is high enough to submerge the Great Barrier, joining the two basins and forming one extended surface area. During drier periods, the Lake's water level is low and the Great Barrier emerges. When the northern basin is no longer fed by water overflow from the southern basin, it can completely dry out.

The most distinctive feature of Lake Chad is its variability. The Lake has a long history of wet and dry periods. The various states have been described as ranging from "Great Chad" to "Normal (or Medium) Chad", to "Little Chad", and lately even to "Dry Little Chad" (which refers to the northern basin being dry throughout the year) (see Figure 1 below). These states are directly dependent on variations in rainfall over the Chari basin. After a wet period, with a Medium Lake Chad consisting of a single water body of approximately 20,000 km2 during the 1950s-1960s, Lake Chad moved into a Small Chad phase due to drought in 1973, dominated by wetlands and with the two main basins again separated. The surface area of the north basin was highly variable, with occasional drying periods between 1982 and 1994. From 1990 to 2014, the average total surface area of the Lake was approximately 8,000 km2 on average. The water's surface area in the northern basin has seen much more variation: several years with no supply (1985, 1987, 1988 and 1991; meaning Dry Little Chad state), years of seasonal drought (particularly between 1982 and 1994), and relatively wet years when the basin never dried out completely (from 1995 to 2013).

Figure 1: Characteristics of the various states of Lake Chad

Lake Chad	Dry Little	Little	Medium	Great
Chari River inflow (km^3/year)	<15	15-34	35-43	>43
Water level (m)	dry northern basin	different levels	280-282	>282.3
Number of bodies of water	several	several	one	one
Lake's total surface area (km^2)	2,000 6,000	2,000 14,000	15,000 19,000	20,000- 25,000
Area flooded in the northern basin (km^2)	0	0-8,000	9,000	10,000
Dominant landscape	marshland and savannah	marshland	dune archipelago	open water
Aquatic vegetation	++	+++	++	+

Source: IRD

The Lake's water level and surface area thus result from the overall balance of water inflows, resulting from direct rain, from rivers, and from losses, due to evaporation, abstraction and infiltration into groundwater tables (from natural or anthropogenic causes). The Chari River accounts for the main inflow into the lake (85%), which in turn is dependent on rainfall. The Lake's other tributaries (Komadogu-Yobe, El Beïd, Yedseram) provide less than 10%, while the remaining comes from rainfall directly on the Lake. It has been observed that when rainfall in the Chari basin varies by 10%, the Chari River's annual flow varies by 30%. This results in a proportional variation in the Lake's surface area. The Lake therefore amplifies variations in rainfall in its basin (Figure 2).

Figure 2: Average rainfall over the basin and the Char River's flow rate since 1950

Period	Rainfall over the basin	Flow rate	
	mm/year	km^3/year	m^3/year
1950-59	1114	42.1	1334
1960-69	1059	40.3	1278
1970-79	929	27.3	866
1980-89	877	17.7	561
1990-99	974	21.7	688
2000-09		21.2	672

Source: IRD

Lake Chad is currently in a Little Chad state, resulting from the transition from a relatively wet period (1950-1970) to a period of generalized drought in the Sahel and the Chari basin (1970-1990), particularly exacerbated during the crises of 1973 and 1984. Generally speaking, annual rainfall has fallen by approximately 150 mm in the whole basin and the isohyets have shifted south by 150 km. The Chari River's annual flow rate has fallen below 34 km3/year, resulting in the emerging of the Great Barrier and the transition to the Little Chad state. The variations in water level lead to modifications in the flora and fauna. The extension of marshlands is favorable for temporary cropping on fertile soils and for the production of an abundant but little-diversified fish population.

The shrinking of the Lake and its transition into the current state have been attributed by some in part to irrigation or even water for household/livestock use, in other words, to excessive withdrawal of surface and groundwater. However, the IRD study concludes that total water abstraction and consumption throughout the basin has so far had a relatively small influence on the Lake's actual water levels, and that variations are still mainly attributed to rainfall. Yet, a growing basin population, coupled with climate change (most likely experienced through rising temperatures and reduced rainfall), could change this situation. The region has seen major population growth over the last few decades: those that inhabit the lake's immediate hinterland (islands, shores and up to 30-40 km from the shore) went from 700,000 in 1976 to a current 2 million. Unmanaged anthropogenic water withdrawals could therefore have a much stronger impact on inflows and water table/levels. As such, water use efficiency and water saving technologies become increasingly important, in addition to water regulations as prescribed in the Water Charter.

The ecosystem services that the Lake Chad basin provides make it an area of demographic pull. When resources were wiped out by droughts (in particular in 1973 and 1984), there was an influx of populations from the Lake's hinterlands and activities were altered, with communities adapting agriculture, livestock farming, and fishing pluri-actively as needed. The densely populated southern shores (50-100 inhabitants per km2) contrast with the northern shores. This contrast can be explained by the greater environmental variability in the northern basin, but also by its isolated position, located far from bigger southern markets and poorly served. Lake Chad is one of the few rural Sahelian regions to have a positive migration balance. Yet, residents of the conventional basin (about 50 million) are currently living in an uncertain situation. Aside from lowering waters, there has been a decline in the output of cereals (10% deficit), fisheries and livestock. This underscores the necessity of mitigating the risks of growing human pressure on resources, maintaining the ecosystem services that provide livelihood in the basin, and adapting to climatic change and uncertainty.

For this part of the central Sahel, current climate models are unable to predict with certainty whether or how much climate change will affect the levels of Lake Chad. Different scenarios are possible. According to a climate change

study conducted by GIZ, climate change under various scenarios is mostly driven by a temperature increase in the region. No significant difference in temperature development is forecasted until the 2040s. The modeling results forecast the highest projected increase of mean annual temperature for the central and eastern Lake Chad Basin reaching in some areas up to 3°C (B1 scenario) or almost 6°C (A2) by the end of this century. After 2049, temperatures under an A2 scenario will rise more quickly while B1 temperatures gradually taper off. Rising temperatures will increase evaporation and evapotranspiration, thus reducing available water resources by up to 4 % (B1) and nearly 10 % (A2) until 2099. The conclusion is that there will likely be greater water scarcity, less under some scenarios than others. Moreover, projected climate change will be the cause for a gradual southward shift of agro-ecosystems within the Lake Chad Basin. Displacements will be smallest in dry areas (north) but increase to the south, causing larger change and fragmentation in ecosystems and livelihoods within more humid climates.[8]

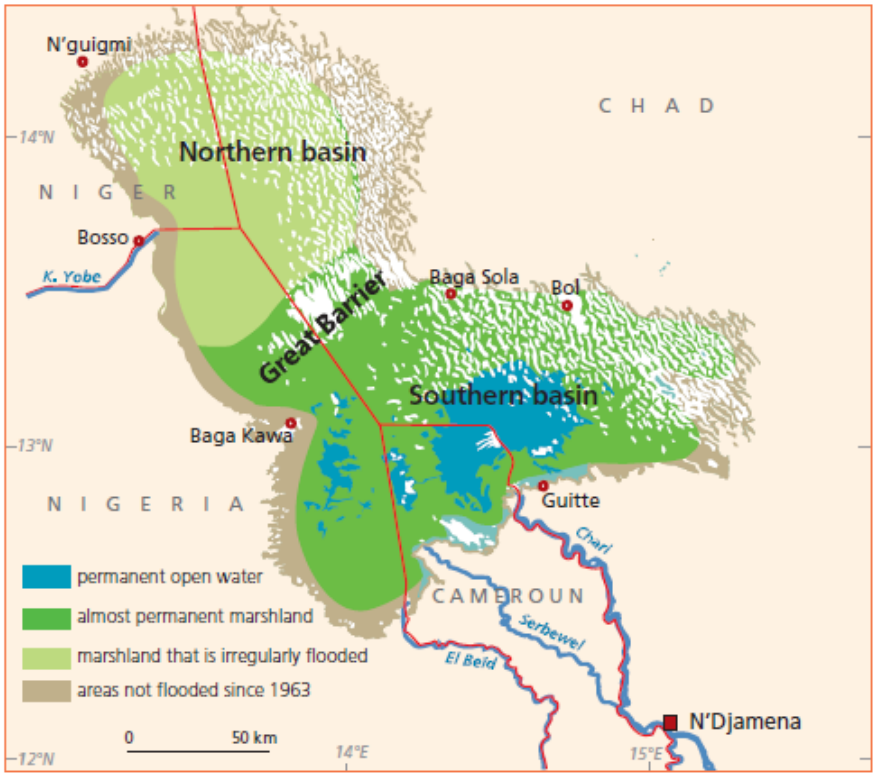
According to a recent 'Joint Environmental Audit on the Drying up of Lake Chad' (2015), called for by the Supreme Audit Institutions of the four riparian countries, despite scientific debate on the cycle and effects of the drying up of the lake, a consensus does exist on what the main problems in the Basin are. These include:
• Climatic changes;
• Increase in pressure from human activities: dams, irrigation, poor fishing practices, cutting of wood, etc.;
• Heavy demographic pressure: the population has quadrupled in 50 years, resulting in conflicts between herders and farmers as well as increased food insecurity;
• Management of the remaining water resources that is uncontrolled, un-harmonized, non-unified, and not shared between the states of the LCBC.

The main solution identified is the need for cooperation between the countries of the basin with the aim of:
• Designing and carrying out joint climate change adaption programs;
• Unifying and/or harmonizing legislation, regulations, practices and sanctions in all the LCBC Member States;
• Harmonizing the policies and strategies of IWRM for the Lake Chad basin;
• Restoring degraded areas, fighting against the degradation of ecosystems in the Lake Chad basin, and promoting alternative energy sources (biogas and improved stoves) among the populations;
• Continuously raising awareness among the people about the effects of intense deforestation and the fight against poverty.

Lake Chad Basin countries are affected to varying degrees by the degradation of productive ecosystems caused by the Lake's natural variability, climate change and human actions. These ecosystems are exposed to stresses which climate change and man-made factors have worsened, and will continue to worsen. Residents of the basin live in precarious and increasingly vulnerable conditions, a context recently exacerbated by growing security concerns which highlight instability. Apart from the Lake's shrinking waters, many problems have emerged or worsened, including a decline in the output of crops, fisheries and livestock. At the environmental level, soil and water-table salinization, aquatic plant invasion and heightened silting have led to a reduction of cropland and a drop in the flow of the Chari-Logone and Komadugu-Yobe rivers towards the Lake. Land degradation and the drastic shrinking of the surface area of Lake Chad have led to the disruption of production. There is a general fear, according to some forecasts, that the Lake may actually disappear twenty years from now if the current rate of recession continues. Despite recent improvements due to more favorable rainfall in the region, the Lake's water surface area remains well below its 1960s level of 25,000 km². This current situation of a "small Lake Chad" is further compounded by wind and water erosion, drought, desertification, the uncontrolled clearing of green spaces for firewood, shrinking pastures, poorly valued production, and poor governance of resources. Population pressure increases on the already fragile lake environment have resulted in intercommunity conflicts over access to shared resources, a situation likely to intensify.

[8] GIZ

Figure 3: Schematic map of Lake Chad's average situation around 2010



Source: IRD

Lake Chad is a source of livelihood for millions of people inhabiting the catchment. The ecosystem services it provides are particularly valuable in a Sahelo-Saharan-Sudano context characterized by aridity and the unreliable and shrinking availability of water resources. The region is a food exporting hub, playing a key role for food security of a hinterland with nearly 15 million inhabitants and two metropolitan centers, N'Djamena in Chad, and Maiduguri, the capital of Nigeria's Borno state. The area has high potential with regards to food production and employment but the impact of the lake depletion has severe repercussions, especially on the basin populations that depend on its natural capital and face extreme challenges of poverty. Continued depletion of basin water resources could result from reduced rainfall due to climate change, increased siltation and pollution due to improper land use practices, or to significant increases in water withdrawals from the rivers feeding the Lake mainly from Cameroon, Chad and Nigeria. The basin is a fragile socio-economic system and both communities and ecosystems experience extreme vulnerabilities and insecurities.

Figure 4: The population of the Lake and its regional environment

Source: IRD

It is clear that the fragility that characterizes the Lake Chad Basin stems from complex problems relating to intertwined environmental, social, economic, and political issues. The scale of the problem requires a regional approach, one based on the rehabilitation and strengthening of the resilience of socio-ecological systems. Within this context, AfDB has proposed PRESIBALT. The total program cost stands at UA 71.23 million, of which UA 53.82 million come from ADF resources. PRESIBALT will be implemented over five years and will directly benefit 15.3 million people living in the Lake's impact area, 52% of them women, by improving their incomes, food security and access to social infrastructure. It will also improve regional and local cooperation for integrated natural resources management and intra-regional trade in agricultural produce as well as address the social dimensions of resilience, which will in the long run reduce potential sources of conflict. In the drive to take into account the security context around Lake Chad and the urgent need to intervene in the area in order to reduce factors of fragility, PRESIBALT will be implemented according to a "modular" and "conflict-sensitive" approach which allows for implementation of activities in the conducive regions based on annual insecurity assessments.

PRESIBALT aims to: (i) strengthen the resilience of socio-ecological systems; (ii) develop key products in a context of adaptation to climate change; and (iii) strengthen social peace through sound governance of shared resources. To that end, major development works will be undertaken to improve the water flow coefficient of the tributaries of Chari-Logone and Komadugu-Yobe so as to re-flood the dried floodplains and preserve ecosystems and biodiversity. A value chain approach will allow for the protection, storage, increased supply and marketing of agricultural and fisheries products. PRESIBALT takes into account the extreme urgency of environmental safeguard actions and economic activities of the population. With this approach, implementation will factor in local specificities, income generating activities, and various levels of security. The program has three components: 1. Preservation and development of water

resources; 2. Development of ecological services and value chains; and 3. Institution building and program management. See the table below for main differences between PRODEBALT and PRESIBALT.

Since PFD approval, a number of other interventions have taken place which constitute the current context within the basin: the LCBC developed the FYIP for the period 2013-2017, the LCDAP, and other carefully designed scientific or technical studies. The AfDB has also conducted three studies on the Lake Chad Basin: the Inter-basin Water Transfer Study (2011), Study on the Current Status of the Lake (2013), and the Study on Erosion and Silt-control Guidelines (2013). The findings of these studies facilitated the preparation of PRESIBALT, and more specifically, assessment of socio-ecological resilience factors of Lake Chad.

Activities funded by PRODEBALT and the new baseline PRESIBALT:

Lake Chad Basin Sustainable Development Program (PRODEBALT) Implementation period: 2009-2016	**Multinational – Program to Rehabilitate and Strengthen the Resilience of Lake Chad Basin Systems (PRESIBALT)** Implementation period: 2016-2020
Total cost: UA 60.07 million jointly financed by an ADF grant for an amount of UA 30 million and other donors (GTZ, BGR, EU, World Bank, and ISB). In USD 90.96 million.	**Total cost:** UA 71.23 million of which UA 53.82 million from ADF resources. In USD 110.4 million.
Program objective: To sustainably reduce poverty among the populations living on the Lake Chad basin resources. The program aims at the rehabilitation and conservation of the productive capacities of Lake Chad basin ecosystems so as to adapt the production systems to climate change.	**Program objective:** To build the resilience of socio-ecological systems for sustainable and inclusive development in the Lake Chad Basin
Component 1: Protection of Lake Chad and its Basin (i) Soil conservation; (ii) Fight against invasive species; (iii) Conservation of biodiversity - Soil conservation and soil moisture conservation over 27 000 ha and fixation of dunes over 8 000 ha - Regeneration of grazing-land ecosystems over 23 000 ha - Control of invasive aquatic plants in water bodies - Conservation of the endangered Kouri cow species - Clearing-out of the Vrick channel over 15 km - Study and plan of optimal management of reservoirs and water supply points of the basin	**Component 1: Preservation and development of water resources** (i) Preservation and development of water resources; (ii) Rehabilitation of agro-hydro-meteorological surveillance networks; (iii) Drinking water and sanitation - Rehabilitation of the Waza-Logone, Hadejia-Nguru and Komadugu-Yobe floodplains (833 km) - De-silting of sensitive areas of Komadugu-Yobe in Niger and Nigeria, and Chari-Logone in Cameroon (1600 km) - Anti-erosion works in 50% of highly vulnerable zones to prevent weathering and water erosion - Procurement/rehabilitation of agro-meteorological stations (57), hydrological stations (77) and piezometers (64) - Rehabilitation/installation of 8 “data-loger” manometers with tele-transmission capabilities - Construction of mini drinking water supply systems and boreholes equipped with solar-powered pumps
Component 2: Adaptation of production systems to climate change (i) Integrated Management of Water Resources; (ii) Sustainable Management of forest and pasture resources; (iii) Fish stock development and management; (iv) Support to Local Development Initiatives - Extension of the piezometric observation network - Sustainable management of forestry, pasture and fishery resources - Community forest plantations on 10 000 ha and 20 000 ha agro-forestry among farmers/graziers - Restoration of 12 000 ha of classified forests - Demarcation of 1500 km transhumance corridors combined with 44 watering holes - Rational exploitation of wood through indirect actions by popularizing the use of stoves (450 000), Chorkor stoves (6000)	**Component 2: Development of ecological resources, services and value chains** (i) Creation of a cross-border protected area and a world heritage site; (ii) Development of value chains for the main basin outputs; (iii) Social dimension of resilience - Creation of a Transboundary Biosphere Reserve and world heritage site - Increase in sustainable production of fish, cereals, wood and livestock products - Reduction of subsistence farming pest-related losses and post-landing losses of fish - Promotion of promising sub-sector value chains (cereals, fish, NTFPs, meat, etc.), especially for women - Support for small and medium sized enterprises involved in socio-professional reintegration and other IGAs - Putting in place of green wind and solar power generation

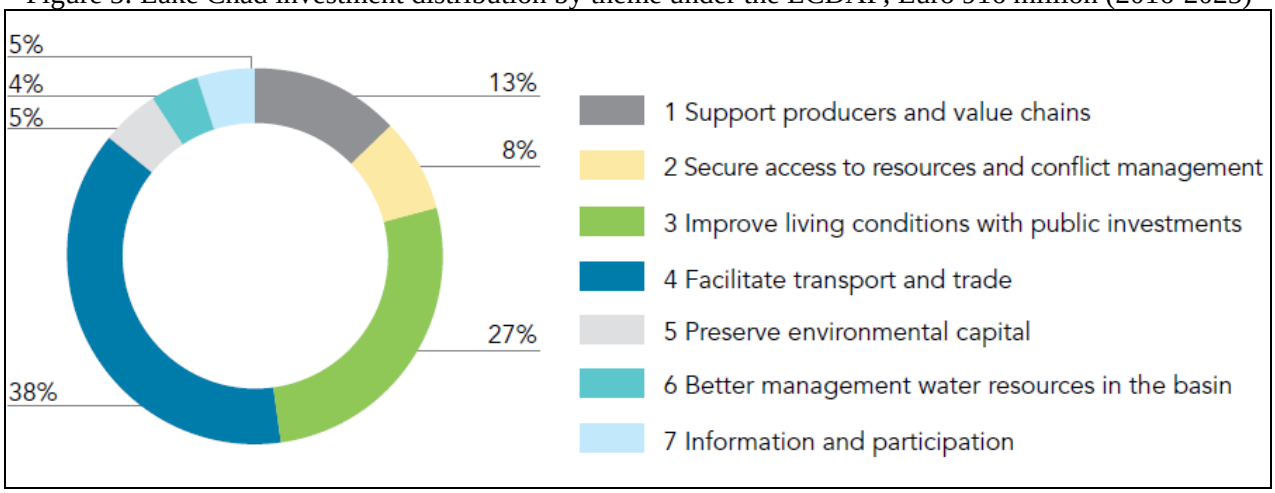
and biogas digesters (200) on the basis of 5 national wood supply master plans - Construction of 15 landing quays with related infrastructures - Establishment of local development funds to finance basic community infrastructure and 200 micro-projects for diversification and promotion of growth-oriented sectors (arabic gum, spirulina, etc.) - Improvement of health through the distribution of 60 000 mosquito nets, control of HIV/AIDS and waterborne diseases	plants - Equipment for developing, processing and marketing - Improved access by women to irrigated land schemes - Creation of multipurpose centers for women
Component 3: Institutional Support - Improvement of stakeholder skills (15 300 officers, technicians, leaders of farmer organizations, including 40% women) - Building of LCBC institutional capacities, including strengthening of the Observatory - Conduct studies and research, including preparation of the erosion and silting control master plan **Component 4: Program management** - 1 regional coordination unit within the LCBC and 5 national coordination units	**Component 3: Institution building and program management** (i): Institution building (ii) Coordination and management - Trained beneficiaries (including women) - Reinforced women's leadership - Reinforced local governance - Rural and community leadership - Coordination - Planning and monitoring of activities - Recruitment of service providers - Financial management and audit

Moreover, other partners are currently developing their own regional interventions in Lake Chad also related to SAP implementation, including UNDP with GEF funding. UNDP is also in the process of finalizing its project document. The World Bank supported the LCBC in very recently developing and endorsing the LCDAP, a 10-year Euro 916 million plan with 173 activities and seven priority themes, showcased during a Paris COP21 side event (see figure 5 below). Furthermore, other partners have moved forward on work and studies related to groundwater (BGR, EU), organizational development (GIZ) and climate change adaptation (GIZ). Additionally, GIZ is assisting the LCBC with an internal reform process, which is expected to be concluded in the coming months. All these recent assessments and interventions set the context and changed the 'knowledge baseline' of the project which has affected and informed the choice of activities for the AfDB GEF project. Recent assessments demonstrate that Lake Chad suffers from a progressive deterioration of its productive ecosystems due to the natural changes in the Lake, climate change and anthropogenic actions. This situation affects all the countries of the basin at varying degrees and has led to increasing deterioration in the living conditions of the conventional basin populations (about 50 million people). During GEF project design, these important studies and activities have been carefully considered and cooperation with basin stakeholders and partners will continue throughout implementation for a better utilization of science, knowledge and collaboration in enhancing project impact.

The barriers to achieving the outcomes of the LCB-NREE program include coordination at the regional level to ensure child project activities are integrated to achieve regional impact. Capacity at the local level will be strengthened through the national child projects to ensure institutions and communities contribute effectively to critical region-wide priorities. Illustrating the significance of local actions within the regional context will be important to provide incentives for national governments and communities to realize the extent of their role in environmental protection. Enhanced awareness and appreciation of interlinkages within landscapes are also part of the program. National child projects will thus carry on the momentum of PRODEBALT and PRESIBALT, sustaining activities at local level where action is also critical.

All components and proposed activities under this GEF CEO Endorsement document will be closely coordinated with ongoing and forthcoming activities supported by GIZ, BGR, UNDP and the World Bank. It will particularly complement future investments by the UNDP-GEF project ID 4748 and the LCDAP.

Figure 5: Lake Chad investment distribution by theme under the LCDAP, Euro 916 million (2016-2025)



Source: Lake Chad Development and Climate Resilience Action Plan, 2015

A. 5. Incremental /Additional cost reasoning: describe the incremental (GEF Trust Fund/NPIF) or additional (LDCF/SCCF) activities requested for GEF/LDCF/SCCF/NPIF financing and the associated global environmental benefits (GEF Trust Fund) or associated adaptation benefits (LDCF/SCCF) to be delivered by the project:

The initial project concept designed as a PFD and a change in baseline require an in-depth description of the detailed components, activities and incremental reasoning for each child project to be financed by GEF. The project, despite a baseline change, still follows the original guidelines of the PFD but the specificity of activities is better defined in each CEO endorsement document, with added consideration for new assessments and interventions, as explained, which make cooperation and synergy ever more necessary. As an example, activities related to groundwater assessments have been revised/removed since the PFD given actions on this in recent years by BGR.

PRESIBALT and the GEF activities are meant to catalyze and enhance implementation of the SAP based on IWRM as guiding principle, with the GEF funding making investments more sustainable, transformative and with potential for environmental scale up. PRESIBALT deals with the environmental causes of fragility, and is implemented within a context of local, national and regional vulnerability, which together compound the fragility stemming from environmental sources. The Lake Chad context underlines the clear interlinkages between socio-politico-economic and ecological fragility, and the need to develop an incremental environmental program for global benefits based also on local livelihood needs. Hence, catalyzing collective management of Lake Chad to protect and sustain ecosystem services will be promoted while providing benefits also for production, food security, rural development, landscape health, and regional stability.

Lake Chad is a very complex system within a fragile semi-arid context. The condition of the lake receives a confused image explained by the strong water and environmental variability, which causes changes in the landscape, wetlands and agricultural areas and its cross-border nature divided among four riparian countries in addition to others forming part of its conventional basin. Such a reality and key pending questions (such as, is Lake Chad disappearing?) makes establishing and sustaining a clear development strategy for the basin difficult. According to more recent analyses, the extreme alarmism surrounding Lake Chad should be better controlled. The IRD expert group review, done as part of the 'Lake Chad Preservation project: contribution to the sustainable development strategy for the Lake' financed by the French Global Environment Facility (FFEM), was prepared with the purpose of informing public policies on Lake Chad through a summary of existing scientific and technical knowledge. According to the review, there are strong, actionable measures that can be taken to improve the Lake conditions. Despite a difficult situation, the current context is favorable to action even amidst inaccuracies and alarms about whether the lake is disappearing, the impact of climate change, the consequences on populations, and other concerns. The future of the Lake depends on water inflow, demography, and socio-economic development. As such, GEF activities consider these aspects and will target related measures. It is clear that unless the lake basin is conserved, its future is insecure but numerous measures can help secure its socio-ecological

integrity. GEF incremental activities will build upon the baseline and recommendations emerging from recent assessments to implement some of these measures.

The AfDB's intervention through PRESIBALT and the GEF activities aim to restore the productive capacity of basin ecosystems and the conservation of a critical habitat, based on a more effective cohesive management of transboundary resources and select measures to protect, rehabilitate and conserve ecosystem services for the overall benefit of food security and resilience. The GEF activities will build upon the PRESIBALT and other partner interventions to enhance participation and capacity of stakeholders; improve coordination aspects within the basin, including of national projects; strengthen the institutional and enabling framework for the integrated and sustainable management of resources; help improve water use efficiency and conservation; and help sustain biodiversity and ecological capital for both local and global benefit (especially in conjunction with the national child projects). The GEF IW funds will promote a more integrated, equitable, and coordinated management of the basin by promoting stronger sustained sub-regional cohesion on the Lake's needs. The project aims to set conditions which safeguard and restore the functioning of this critical habitat before continued resource depletion and degradation lead to the destabilization of communities, states, and the entire region. In a fragile context where sustainable development and climate change challenges clearly interpose, this has become critical.

Significant progress has been made at the organizational, regulatory and technical levels with the adoption of the SAP, the signing of the Water Charter, and the FYIP. However, numerous gaps exist, not only in terms of capacity but also procedural and informational. Certain critical functions such as water surveillance are yet to be fully applied, while regional cooperation and enforcement capacity of the LCBC remain weak, with a regulatory framework that remains incomplete. The GEF IW project will help to foster effective methods of governance at the regional level for a better management of aquatic resources, pastures, fisheries and crop areas through full adoption of the Water Charter (which needs ratification by one more country to be operational). The foundation set by previous projects, and new interventions currently being planned by other partners, are solid bases upon which to build an ensuing initiative and investments to reinforce the momentum, sustainability and the achievement of GEB aspects.

In a context of insecurity (social, political, economic, climatic, environmental), where conservation needs can conflict with livelihood and economic needs, the management of natural resources proves particularly challenging and requires a high level of coordination and collaboration between countries. Despite its important mandate, the LCBC's effectiveness is inadequate and needs much reinforcement. Given recent attention and growing donor funds being earmarked for Lake Chad, there is rising concern about the absorption capacity of the LCBC in effectively receiving, managing and executing all these funds. The LCBC will be a prime target for institutional strengthening and knowledge generation, augmented by its role as project executer. The GEF project will allow the LCBC to: better plan and manage implementation and impact effectiveness; ensure comprehensive ecological investments vis a vis an economic development platform; better monitor the basin for sound decision-making; and create a platform for inclusive participation. The project will thus have an underlying consideration for both conservation and sustainable development. Enhanced data and knowledge will help achieve a more informed approach.

Following the ecosystem-based approach of the SAP, GEF funding will specifically deliver key IW-1 inspired governance arrangements, capacity building, monitoring and data management, demonstration activities focused on water conservation, knowledge creation and information exchange, with added consideration for climate change. Activities are integrated within PRESIBALT and build on LCBC needs in collaboration with partners (e.g. UNDP, GIZ, BGR, WB), as identified during PPG phase, especially where activities have potential for overlap. Stronger collaboration also allows for stronger expertise, momentum and impact. The IW regional program will aim to consolidate efforts in promoting conjunctive management of surface and ground waters and shared national responsibilities for managing and conserving basin resources. The project rests on 3 integrated components, as described below, with specific outputs detailed in Table B:

Component 1: Strengthening capacity, institutions and cooperation for IWRM in the Lake Chad basin
Component 2: Pilot demonstrations of technologies and practices in water use efficiency and conservation
Component 3: Improving and consolidating knowledge, data and monitoring

Component 1: Strengthening capacity, institutions and cooperation for IWRM in the Lake Chad basin

Main objectives:

- Strengthen capacity and cooperation for transboundary IWRM with considerations for both environmental protection and rural development
- Reinforce the LCBC's organizational and implementation capacity
- Ensure coordination amongst the various partners with interventions in the Lake Chad region

The first component will promote transboundary water governance, increased collaboration among stakeholders at basin level, and institutional strengthening for IWRM. Component 1 is most in line with meeting SAP targets under EQWRO 5 and will stimulate and ensure adherence to the participatory water governance rules in the Vision and Water Charter. Activities will contribute to SAP implementation and the technical/institutional strengthening of regional and national water bodies, with an emphasis on the LCBC given its key role in regional action. That key role needs consolidation with better organizational skills, technical expertise, and capacity to fulfil its purpose as transboundary basin organization. Fluctuating between a political body, a technical role for the management of shared natural resources, wider development and regional security, the LCBC's position will be strengthened as the interface between member state strategies, sub-national livelihood needs, and the global challenges facing the Lake.

The baseline project focuses on aspects of transboundary management through technical assistance to the LCBC. However, operations with other partners are often disjointed. As such, a strengthened coordination mechanism within the LCBC will be a primary incremental and first output of this GEF project, with specific support to the Donor Advisory Committee and the International Cooperation Division under the new LCBC organogram. The aim is greater synergy for a more streamlined implementation of the SAP and now also of the LCDAP. This platform/system will be set up jointly with other partners (UNDP and GIZ in particular) and will serve as a stage for better donor consultation and guidance on SAP implementation and project coordination for greater aid effectiveness, so that present and future interventions are aligned for ultimate impact on the ground. AfDB, as currently the LCBC's main technical and financial partner, will provide support in convening quarterly meetings of the Donor Advisory Committee and help make strong links between the Committee and the project implementation division, under which different PIUs are placed. The UNDP-GEF project will instead complement this aspect by supporting the LCBC Secretariat to develop coordination and monitoring tools, such as updated donor mapping tools and integrated work plans, and needed training in donor consultation methods.

The baseline project takes into consideration some aspects of management capacity through technical assistance to the LCBC, as do a number of other partner programs, especially GIZ which has been assisting with a module on organizational advisory services since 2005. The complementary IW project will address issues related to the operational, technical and strategic planning capacity of the LCBC to devise and implement initiatives for better land and water practices that consider transboundary issues (e.g. climate change). AfDB capacity building and training activities will not only target LCBC needs based on select identified gaps, but also complement related program activities as necessary. According to the 'Handbook on IWRM', Basin organizations have three main functions: 1. monitoring, investigating, coordinating and regulating; 2. planning and financing; and 3. developing and managing. Each of these aspects will be strengthened within the LCBC, with training on IWRM and ecosystem-based planning, project management, strategic planning, financial and administrative skills, data gathering and environmental monitoring, for a more effective and sustained use of resources and their application. Timing is good for this capacity building, which aims to continue the momentum of the GIZ support, given their program ends in 2018 with no indication of whether it will continue. The specific targets for trainings (divisions, operational staff, etc.) will also depend on the reforms currently happening at the LCBC, and will be determined once the reform process has been finalized in 2016. Given the growing attention on Lake Chad, the LCBC needs to be better equipped to handle the influx of resources.

Water quantity/quality monitoring and basin surveillance programs are currently lacking or inadequate regionally and in the riparian countries. There is no regular monitoring of surface and groundwater levels or water quality from riparian states, due particularly to lack of understanding of its importance and limited capacity to do so. An environmental monitoring system is required to better assess the basin water resources and their sensitivity to climate and anthropogenic changes. LCB regional needs in environmental monitoring include meteorological needs (rainfall, evapotranspiration, etc.), hydrological needs (water levels, discharges, water balance, etc.) and environmental needs

(erosion, deforestation impact on water resources monitoring, etc.). The creation and equipment of an expanded monitoring network is urgent in the basin and the PRESIBALT is targeting this infrastructure. IW component 1 will support measures to establish effective surveillance for monitoring water flow and quality, and build technical capacity accordingly. A system of regular quantitative and qualitative monitoring of basin water resources (surface and ground) will be set up, building on the hydro-meteorological stations and aquifer observation networks that will be rehabilitated/installed by the PRESIBALT. Enhanced environmental monitoring will be pursued in collaboration with UNDP and BGR, with the former focused on supplementing data with qualitative assessments and community monitoring, and the latter through its module on groundwater mapping and assessment. The LCBC will be better able to sustain observation and communication methods to limit or reduce infringements of regulations, consistent with the Vision and Water Charter.

Furthermore, an alert/early warning system will be set up (with a focus on drought) to complement the monitoring system, relying on the hydro- and agro-meteorological networks and forecasting tools. The early warning system will also be linked to the communication strategy and tools envisioned in component 3, so that information can be disseminated to authorities and communities on impending drought, thus helping to mitigate impact. The use of radio will have a strong role in reaching farmers and pastoralists. This will ensure better adaptive capacity and response measures. The system will also link to UNDP project activities on developing emergency response plans, linking government, donor agencies, and communities, which will help basin stakeholders better respond to climate related occurrences. The UNDP project further aims to engage communities for basin monitoring purposes, which will prove further useful for information dissemination. Again, AfDB and UNDP actions are complementary here and the PIUs will work in parallel to develop a working information, anticipating and response system. The basin surveillance program will integrate support by the basin states in the collection of data and the monitoring of water levels in major tributaries, while risk forecasting will attenuate, reduce or halt the effects of variations in rainfall, temperatures and water levels.

The sustainability of SAP implementation depends on a number of issues, including political will in Member States, sustained capacity, the security situation in the region, and adequate financial resources. Enhanced awareness and appreciation of co-dependence between ecosystems, economic sectors and human development will help ensure a holistic approach to enhancing the productivity of landscapes. The measures above seek to enhance understanding of such interlinkages and multi-state collaboration for information gathering/monitoring/sharing amongst states and stakeholders. Training of LCBC staff will thus be complemented by training of national water bodies' staff in SAP and Water Charter implementation aspects, given that regional and national institutional strengthening go hand in hand for effective transformational change within the basin. Such will enhance the LCBC enforcement capacity and the active engagement of national bodies, critical in addition to scientific and technical information. National institutions managing terrestrial ecosystems and wetlands will be provided with skills to better address current and emerging challenges and risks, and promote collective monitoring mechanisms. The capacity of national staff to undertake observation and interpretation of data is particularly limited. Capacity development at national level by the AfDB will make sure national water bodies are able to handle new surveillance equipment, collect the required data, and sustain the monitoring functions that go along with the networks. Training and awareness raising at national level will also underline the need for environmental protection, surface and groundwater safety, and climate risks, in hopes to influence future basin interventions and mitigate potential negative consequences, for example of future pumping of groundwater or large scale irrigation. National level training will have the incremental effect of enhancing understanding and commitment to common Lake Chad regional objectives.

The project will additionally support the continued process for the full adoption and application of the Water Charter, taking all the necessary measures to encourage ratification by the remaining Member States. Ratification is voluntary. As such, support to the ratification process will involve awareness raising and dialogue with the Council of Ministers, parliamentarians and decision-makers. Adoption by at least one more country is needed to make the Charter operational. Once it becomes effective, the Charter becomes legally-binding, which is expected to thereafter influence national frameworks which will need to be aligned to the Charter provisions. The UNDP project aims at advancing national level reforms and harmonizing national legal and policy frameworks for effective conjunctive management of surface and groundwater to reflect the relevant provisions of the Water Charter. As such, the AfDB and UNDP projects complement very well also in this aspect and will work in parallel.

Finally, given that the first FYIP is up to year 2017, it is critical that a successive plan be developed during the course of this project. This new plan must integrate changes from the revised SAP, new risk considerations (e.g. more emphasis on climate change and regional security), and new strategies, especially the LCDAP. An Investment Plan beyond 2017 will be designed in cooperation with UNDP and GIZ, including a tracking system to continuously monitor the status of SAP/FYIP implementation and progress. If found necessary, this may also include a strategic assessment of financing for the LCBC. Its current funding model is not sustainable given it relies solely on the contributions of Member States and support from donors, which places sustainability of basin interventions at risk.

Activities:
- Training for LCBC staff on IWRM and ecosystem-based approaches
- A system of regular quantitative and qualitative monitoring of basin water resources, based on rehabilitated hydro-meteorological stations and aquifer observation networks
- Alert/early warning system for drought based on hydro and agro-meteorological surveillance
- Training of national water bodies staff on SAP/Water Charter implementation, ecosystem-based planning, and data gathering
- LCBC staff trained on aspects of organizational development (strategic planning; information management; financial and project management)
- A coordination platform strengthened within the LCBC to ensure donor/partner collaboration and synergy
- Five Year Investment Plan beyond 2017, including a tracking system

Component 2: Pilot demonstrations of technologies and practices in water use efficiency and conservation

Main objectives:
- Pilot demonstrations in sustainable water management and water saving to improve use/access and productivity of land
- Local stakeholders and beneficiaries engaged in sustainable natural resources management

Given the critical linkage between environmental degradation, especially in drylands, and the management of water resources in transboundary drainage basins, IWRM activities must link with actions on the ground for the sustainable management of water (and other natural resources). Component 2 involves pilot demonstrations in water use efficiency and water conservation as a way to safeguard water resources and inform best practice, given their growing scarcity in the region. The pilots can help to incorporate IWRM and sustainability into the productive landscape, and be scaled up to improve water availability, rehabilitate landscapes and deliver tangible benefits for livelihoods at local level. The focus is on illustrating stress reduction measures that, once replicated, will have a strong impact for reducing pressures on ecosystems.

The surface water and flow reductions in recent decades have impacted economic activities and food security in the basin. Growing environmental degradation in the region has been driven by both global and local causes: climatic variability and increasing demands on the Lake and pressure on surrounding landscapes. It is likely that this situation will worsen, with significant impact on the local economy, flora, fauna and the delivery of ecosystem services. Local scale solutions can contribute to preserving the resource base and support the rural livelihoods dependent on it. One important answer is in water conservation and adaptive management, which combine efficient management and water saving to reduce demand and pressure on supply. Opportunities for adaptive water management within the Lake Chad basin should be assessed and up-scaled through suitable technologies for small-scale agriculture.

Two on the ground pilots in the countries of Nigeria and Chad focused on innovative water saving and adaptive technologies will be designed and implemented. Nigeria and Chad have been chosen given that the major tributaries into Lake Chad come from their territories, and because of the higher concentration of people and irrigation systems. The demonstrations will be based on the assessment and adoption of techniques and measures that help conserve water, using technologies that are suitable to local conditions and that can be coupled to a sustainable increase in agricultural production. The two primary techniques will be drip irrigation and water harvesting. Local wellbeing, livelihoods, and socio-economic considerations are thus important considerations of the pilots. A final site selection and technical details will be determined through consultation with different stakeholders and feasibility studies once project implementation begins, taking into account the evolving security situation. Although pilots, these investments will be

important in linking the regional project with the national child projects financed by the GEF STAR allocations. Indeed, the pilot techniques will have strong potential for replication and climate adaptation. An assessment of the pilots and successful techniques will help inform the types of interventions that will be undertaken as part of the national projects. These can then be linked to community based activities that seek the protection of habitats, croplands, woodlands and wetland biodiversity threatened by overexploitation and degradation, and scaled up for transformative change.

In the Lake Chad basin, water scarcity is a growing threat. The depletion of Lake Chad poses a pressing challenge to irrigated agriculture as well which is an important water consumer in the basin, surely set to increase with projected population growth. Through ground level actions and appropriate technologies, water can be conserved and better utilized, with the inflows to the Lake better preserved and water levels maintained. Since variations in the Lake's water levels are mainly attributed to variations in rainfall and its many repercussions on croplands and natural habitats, investments in SLWM are critical. The basin faces diminishing water, erosion/siltation, and also decreasing availability of arable land suitable for agriculture or pastoralism. Because of growing pressure on increasingly scarce resources, and poor performance of a number of large scale irrigation schemes (mainly in Nigeria), interest has been growing to find ways to improve water use and saving, coupled with a need to improve productivity of existing lands. A number of innovations exist for small-scale farmers to better manage and access water with simple, inexpensive technologies. The introduction of small-scale irrigation technologies (such as drip irrigation, PVC pipes, or tube wells) and rainwater harvesting techniques has led in many areas across the Sahel to an intensification of irrigation with reduced water abstraction and loss, and to stabilizing or increasing the yields of rainfed crops. Although such technologies represent an important potential to increase production while saving water, they are not always successful. The key is to adapt these technologies to local circumstances and to integrate them within a broader framework of rural development.

Two pilot investments will be evaluated and implemented in select sites. These are:
1. Drip irrigation: Drip irrigation is one of the most effective water saving technologies and systems that are small scale and can be low-cost. A low-cost drip system normally consists of: i) a reservoir (bucket, drum or concrete rings), whose capacity is determined by the size of the field to be irrigated and the evaporation averages of the region; ii) a basic low pressure drip kit composed of taps or control valves, a filter and pipes (tubes) or lay flats with micro emitters depending on available space. Drip kits are assembled and available in the form of complete package kits for a fixed area. Drip irrigation can help small-scale farmers grow crops all year round, including during dry seasons. Other advantages of these systems include a reduction in the amount of water needed to grow crops in a given area, labor and time saving, affordable and cost effective, and lower environmental impact.

2. Water harvesting: Water harvesting is the general term used for different techniques to collect runoff or flood water for storage in the soil or in tanks so that it can be used for growing crops, trees or fodder. Water harvesting can also be the collection of runoff water for human or livestock consumption. The advantage of these techniques for small-scale agriculture is to secure, increase or make possible crop production in regions where rainfall is uncertain or occurs in season; hence, very appropriate for the Lake Chad basin. Water harvesting can also prevent erosion, improve soil fertility and recharge aquifers. Capturing runoff is possible both individually and collectively in a community, and a combination of techniques can be used which need be adapted to local conditions.

The majority of the population of the Lake Chad basin is rural, poor and depends on agriculture for its livelihood. Measures must thus be developed for small-scale farmers to better use and manage water with simple, affordable adaptive technologies, based on innovative techniques and practices for water conservation and irrigation. This way, access to water increases together with land productivity and resilience in the face of more uncertain climatic patterns. The stabilization and improvement of water access and crop production through better water control should be a priority in the basin, with considerations for up-scaling effective technologies more widely in the basin. SLWM means having more productive and profitable land that concurrently preserves the ecosystem goods and services which communities and habitats depend upon. The pilots will demonstrate their potential to generate concrete socio-economic benefits at the local level (e.g. increased crop output, income, diversification), clear environmental benefits (e.g. improved soil fertility), and adaptation to climatic variations (e.g. drought mitigation).

Effective demonstration pilots can display success and inform new solutions, laying the basis for transformational change, policy reform and modified human actions. Local and national priorities will be supported by the demonstration

activities to prove that environmentally sustainable approaches to reverse land and water degradation work also towards poverty alleviation and rural development. This will help to increase and maintain interest and political will in the new technologies and basin wide programs. For this reason, component 2 activities will be linked to the five national projects of the LCB-NREE for replication and experience sharing. Lessons learned from the pilots in Nigeria and Chad will serve as a basis for up-scaling effective technologies and practices in the basin through the national child projects. Capacity at the local level (community groups, water users, local authorities) will be strengthened to ensure that stakeholders contribute to the impact and sustainability of the pilot interventions. Component 2 will incorporate a training and learning element, always needed concurrently with field investments (addressing IWRM, degradation prevention and climate adaption together with actual training on new technologies). The technologies can also be complimented by land use planning that integrates management details within communities; for example, by way of water user associations. The learning program will include field visits and experience sharing, and will involve LCBC staff and government authorities as well, as a way to expand reach, knowledge and stimulate national reform. Such exchanges could inform learning by both communities and decision-makers, and influence future advisory and extension services, thus serving as a mechanism for the wider dissemination of the techniques.

Communication, consultation, and community participation during planning and implementation will be sought for better success in management of technologies and in environmental protection. The training of beneficiaries in the two pilot sites through local level learning and farmer to farmer knowledge sharing will serve to strengthen community capacities on water and soil conservation. Illustrating the interdependence and benefits of local actions within a regional context will be important to provide motivations for communities to realize the consequences of their actions on the lake basin and be engaged. Spreading knowledge on SLWM and INRM has long term implications. It can enhance livelihoods in the basin countries and contribute to regional stability in an area that has seen insecurity.

Activities:
- Two on the ground pilots on innovative water use efficiency and water saving techniques
- Techniques, with potential for replication and climate adaptation, are scaled up by the national projects financed by GEF
- Training of beneficiaries in pilot sites to strengthen knowledge on water and soil conservation, coupled with stakeholder experience learning

Component 3: Improving and consolidating knowledge, data and monitoring

Main objectives:
- Improve LCBC information systems, including data collection, standardization and sharing for use at regional and national level
- LCBC and Observatory trained in information management and databases equipped with more data
- Better sharing of information and public awareness on basin wide issues

Inadequate information and data are a major constraint to developing an accurate understanding of the current and future environmental issues in the Lake Chad Basin. They are also a constraint to effective response measures, for example to climatic uncertainty. Managing a transboundary basin requires information and identifying the mechanisms at play in order to interpret data and observations for better response, policy and adaptive strategies. Data also needs to be useful and usable in order for it to be thereafter applied for action at different scales, whether by the LCBC, basin governments, donors, producer organizations, etc. Component 3 involves critical support to the LCBC Observatory and information systems. On top of baseline surveillance networks, the component will facilitate the collection and standardization of hydrological, environmental, but also socio-economic data and information, to greatly improve monitoring and evidence-based decision-making at regional and national scales in the long run. GEF funding will link this effort with national child projects and to national water bodies. Component 3 activities will help inform decisions and responses via more and improved information/data, complementing component 1 on institutional and enabling aspects and component 2 on ground level interventions.

To reinforce the IW outcomes and the GEBs for Lake Chad, component 3 of each national child project will help maintain strong links to the regional IW project, thus strengthening the programmatic aspect of the LCB-NREE and the umbrella role of the IW project. It will help improve data and information sharing among stakeholders, data collection

and standardization, and the application of analytical and monitoring tools, building on the hydromet stations. In addition to a water monitoring system to better assess the basin water resources and their exposure to climate and anthropogenic pressures, the LCB also needs more socio-economic and additional environmental data (e.g.on biodiversity). Standardization allows synergies and the monitoring of environmental, agricultural and livelihood factors which will strengthen the case for INRM/IWRM.

The transboundary nature of Lake Chad requires the harmonization of data, its collection and processing conducted at both national and regional levels. Having common and consistent data reduces transaction costs and enhances engagement among countries in knowledge sharing. A collective information system at basin level is crucial for stocktaking, continuously fed by new data from observations over time. The creation of the regional database within the Observatory is a commendable step. GIZ assistance has helped the Observatory develop the information systems and software needed for data collection, but - as explained by GIZ itself - the data needed to animate the database is still missing. The hydrological and field data on the Lake and basin are insufficient and for the most part also difficult to access. According to the IRD study, there is also not enough data to accurately assess problems of silting in the tributaries and lake, and of extent and trend in biodiversity loss. Effort is needed to augment and systematize this data for better usage at basin scale, preceded by an assessment of informational gaps. Before a suitable evaluation of trends can be made, a gap assessment and a monitoring plan must be developed and implemented, based on both quantitative and qualitative data.

According to the joint environmental audit, although part of its stated mission, the LCBC currently does not ensure the collection, processing, distribution and archiving of data relating to the state of water and other resources in the Lake Chad basin, and their change over time. It lacks appropriate expertise, funds and procedures, and does not have sufficient commitment from the states on this. Component 3 targets such an informational and procedural gap and need, with activities in capacity building, regularization and monitoring methods. Multiple partners of LCBC (e.g. GIZ, BGR, UNDP) are or intend to support monitoring aspects for surface and groundwater and this project will make sure to coordinate with them and with the LCBC Observatory unit to secure data and consistency. GEF funds will build LCBC's capacities to optimally build and use the regional database.

Communication and data sharing between the LCBC and riparian states is currently very weak. Although a data exchange protocol exists and has been signed by the Council of Ministers, it is not put into effect. Focal point institutions in the riparian states are either uninterested or unable to exchange data with the Secretariat. This is due to a number of reasons: countries do not have the financial means, capacity and political will to consistently collect data in their countries as regards the basin. Moreover, it is a duty of the LCBC itself to make sure the protocol is implemented, to assemble and disseminate data on projects or baseline studies, to inform member states, and ensure that countries contribute. However, the LCBC itself currently lacks the finance and technical capacity to carry out these tasks. There is a lack of appropriate procedures and logistics and of sufficient commitment from the states. As such, data exchange points to weaknesses of the LCBC and national focal point institutions which component 3 aims to target. Growing political interest in the region, and more funding, will help increase the interest in the LCBC and the Lake as well, which will be a factor in enhancing data collection and exchange.

GEF funding will support growing understanding of and capacity in systematic and consistent data sharing, will support reactivation of the protocol, and will also ensure an extended partnership in this effort, working, for example, with BGR on groundwater monitoring and GIZ and UNDP on monitoring other environmental or livelihood trends in the basin. This includes raising awareness about the importance of data production and transfer to the LCBC, and training institutions in member countries. In the riparian states, concurrent to training, awareness about the importance of data production and transfer to the LCBC is needed so that data availability and exchange can be improved. Methods will be developed for harmonization of regional and national data collection, clearing and processing. An enhanced information management and data sharing system will be promoted by the project for systematic data gathering by states which feeds into the regional database, thereby integrating training and monitoring activities, and linking components 1 and 3. Information sharing will also be enhanced between regional and national project coordinators, within the LCBC, all the way up to the council of ministers. Knowledge is an advocacy tool which can influence policy and action. More data, better training and understanding, and improved information sharing will expand reach to policymakers and have greater influence on reform. The LCBC will thus be better equipped to inform and encourage national action.

To complement, systematic and regular ecological and socio-economic audits, based on simple indicators, will be promoted to help monitor the status of biodiversity and livelihoods, needed for a comprehensive understanding of the basin context. The AfDB-GEF project will provide support, particularly with quantitative data, to the LCBC Annual Monitoring Review and State of the Basin reports. Such informational tools will be shared with the Council of Ministers, along with more policy oriented briefs. This too will be done in collaboration with other partners, to enrich a multi-level and multi-partner participatory monitoring and advocacy system. LCBC staff will be trained in reporting and M&E techniques based on results based management approaches which make it possible to better assess impact. Furthermore, the LCBC Observatory needs to be better provided with GIS, remote sensing and mapping tools so that relevant interventions can be devised on the basis of scientific and technical information. Technical staff will additionally be trained in skills to observe, model and predict scenarios based on ICT to monitor changes in water resources, but also to better assess other risks. Simulation tools can help calculate the consequences of reduced rainfall or of potential large investments in the basin. The IW project will ensure that ICT-based simulation models are used not only to monitor changes in water flow and lake levels, but also assess various impact scenarios (e.g. reduced rainfall, higher temperatures, population growth, lake contamination) and thus help respond to future challenges. Component 3 will strengthen the skills of technical personnel in the LCBC Observatory and the state agencies of the five countries. It will also ensure that a common document repository will be set up on the LCBC website.

Regular basin technical committees, water resource user and sectoral expert fora will be organized collaboratively by the LCBC and partners for improved information sharing, making sure above efforts come to fruition and that the forums become platforms for information sharing on a larger scale. Effort will also be made in the larger program to strengthen links and seek partnerships between the LCBC, national research systems, and international partners (such as OSS, AGRHYMET, CILSS, CORAF) for enhanced data processing (environmental, socio-economic, and agricultural). The visibility of the LCBC and its work must also be improved for riparian states to include the LCBC as a main issue in their government agendas, and for communities to realize the work it does and the criticality that underlines it. Enhanced visibility and understanding could translate into increased contributions from riparian states, public awareness and action on the ground. A communication strategy (with a strong radio component) will be devised presenting the Lake as a critical resource at risk but a tool for meeting needs related to food security, employment, and rural development. Communication tools and radio will be integrated with the early warning system and UNDP's emergency response plans. They will help disseminate regular basin-relevant information nationally and locally (such as on impending drought), based on joint surveillance and forecasting activities. Stronger communication can lead to better involvement and improved capacity of communities, civil society and even the private sector to better participate in the decision making processes for land and water management.

The Lake Chad GEF program will provide a platform for a more holistic approach to coordination, information collection and exchange, and knowledge based decision-making. M&E at program and project level will complete component activities, with harmonized regional and national project M&E frameworks, so vital for regional programs. Periodic project monitoring will allow improved adaptive management, partner synergy and ecological effectiveness. Joint annual monitoring is envisioned with UNDP for GEF IW related activities. Finally, 1% of IW funding will go towards supporting IWLEARN activities (at least two IW experience notes, participation in IW meetings, etc.). Together with UNDP, the two GEF projects will sponsor representatives from complementary organisations and national ministries to relevant IWLEARN events which will further encourage engagement and sustainability of GEF actions.

Activities:
- Assessment of data and information gaps to clarify information needs
- Methods for standardization and harmonization of regional and national data collection and processing
- Regular ecological and socio-economic audits to monitor status of biodiversity and livelihoods in the basin
- ICT-based simulation models used to assess impacts and responses to changes in water resources but also other scenarios
- Observatory and national staff trained in data techniques, GIS, remote sensing, etc.
- LCBC staff trained in reporting, monitoring and evaluation techniques
- A communication strategy, with focus on radio, to disseminate basin information
- Basin water resource user and sectoral expert forums 2/year
- M&E framework to monitor project-related SAP implementation progress

- Project experiences shared through websites, technical forums, etc.

GEF alternative

Under the IW focal area, incremental aspects will arise from the full consideration of transboundary and integrated water resources management aspects in the planning and management of the basin and within operational bodies and strategies. The IW alternative will serve to include concerns for GEBs into the baseline project, catalyzing collective management and driving multi-state cooperation to balance differing water uses, making the project more transformative and sustainable. Pilot demonstrations for water use efficiency and conservation will arise incremental to baseline work to improve water flow and water supply. GEF funds will complement socio-economic development aspects by addressing the interphase between ecological and livelilhood activities, in an integrated ecosystem-based approach that generates global and local benefits. The project will consolidate good practices in SAP implementation; integrated management of shared resources; and regional cooperation and integration, also incorporating strong considerations for climate change adaptation, groundwater and knowledge generation/sharing into the baseline. Concurrently, the project will realize benefits for human wellbeing, at the center of the on-the-ground pilot measures that seek to enhance water saving and modify human actions to secure the services wrought by ecosystems.

While PRESIBALT, through its three components, focuses more on lake protection and improvement of water flow (for e.g. through rehabilitation of floodplains, anti-erosion structures, agro and hydro-meteorological stations), and the construction of local structures and services for ecological and socio-economic benefit (e.g. rural community infrastructure, sanitation, processing and marketing techniques, value chain development, IGAs, etc.), the GEF will complement the PRESIBALT to enhance aspects of coordination, regulation, data collection and monitoring, and amplify considerations for long-term environmental preservation of Lake Chad. The demonstration pilots will also supplement the income generating activities of the baseline and integrate enhanced considerations for the adaptive capacity of communities and ecosystems. Capacity building within institutions and communities will target incremental issues (e.g. IWRM; adaptation; scientific knowledge collection and data standardization) and build on other partner projects (especially the concurrent UNDP-GEF project, GIZ and BGR). Rather than only planning to sustainably develop Lake Chad, the priority with GEF funds is to eventually restore or rehabilitate the basin over the long-run. Transboundary priorities as identified in the TDA and SAP will form the backbone of GEF support with PRESIBALT, with strong consideration for the new LCDAP as well. The full AfDB-GEF program, with the IW regional project acting as the glue for national level interventions, is designed to promote sustainable solutions to identified problems and adaptive management within an environment of change and insecurity.

The factors and actions (climatic, human, etc.) that result in declining water quantity/quality and basin productivity necessitate coordinated regional effort to protect and rehabilitate the whole landscape and its ecosystems that support biodiversity and maintain the provision of services to the population. These factors and actions will be given full consideration through the GEF project. Within the LCB-NREE program, the national projects will build on the regional project with the aim to support countries and the LCBC achieve SAP/NAP priorities and realize the Lake Vision. However, for utmost impact, the child projects must be linked under an overarching project at regional level. This is the role of the regional project financed from the IW window. The child projects, with their own on the ground investments, are thus completed by an umbrella initiative that addresses governance, synergy and cooperation for shared ad improved landscape management and the continuity of SAP implementation. The project will improve good practices in catchment management, planning across sectors and landscapes, scientific knowledge to guide decision making, and provide platforms for stakeholders to exchange experiences on common challenge and successes.

The GEF incremental financing relates to the following aspects[9]:

Incremental aspect	Relevant SAP EQWRO
- Activities support implementation of the SAP and strengthen regional, national and local capacities in IWRM and ecosystem-based management, with benefits accruing to the environment and livelihoods in the basin.	1-5
- Strengthened regional and national water bodies in transboundary planning and	1, 5

[9] Please also refer to the mapping exercise which displays the linkages between the IW projects and the SAP EQWROs and FYIP.

monitoring, with enhanced promotion of sound water governance.	
- Enhanced sustainability of the baseline project by strengthening the basis for IWRM, and the capacity of the LCBC, its Observatory and national institutions to better and more consistently monitor surface and ground waters. Enhanced IWRM will lead to improved management of surface and groundwater, resilience, and human wellbeing.	1, 5
- Stronger regulatory and institutional frameworks for cooperative management of water resources, with greater operationalization of the Water Charter and consideration of climate change and groundwater concerns.	5
- Demonstration pilots improve knowledge and scale-up potential of water saving and water use efficiency technologies, with capacity to enhance water availability, lessen land degradation, increase production, and reduce vulnerability. Actively involve communities in the pilots, with the equitable sharing of benefits and concrete improvements in livelihoods. Pilots to generate local benefits (e.g. increased incomes, increased production, reduced conflict over natural resources) as well as GEBs and climate adaptation (e.g. drought mitigation).	1, 2, 4
- Strong focus on knowledge generation, data collection/processing/archiving, and its better sharing and use within the basin, for evidence-based decision making and greater impact potential. Enhanced awareness will increase engagement of basin countries in the importance of data and its dissemination.	5
- Improvement and sustainability of LCBC's management capacity, financing and stronger frameworks for strategic short and long-term planning to better effectuate its mandate as a basin commission.	5
- Capacity building and knowledge activities will also address climatic variability and change, a key transboundary concern in the region, and more generally in the Sahel and drylands.	5
- Better coordination with other partners in the basin, primarily UNDP, GIZ, BGR and WB, for the application of lessons, synergy, and avoiding duplication to harmonize complementary interventions for better aid effectiveness and impact, with discernible improvements in environmental conditions and water levels in the long term, thus reducing degradation trends across the basin.	5
- Strengthened regional cooperation, integration and stakeholder engagement by fostering cooperative planning and enabling conditions for sustainable rural development, environmental protection, and regional stability. A project focus on both conservation and development given their critical interlinkage in the Lake Chad basin and the Sahel.	5

Global Environmental Benefits (GEBs)

Through appropriate governance and investments at basin level, IWRM is key to the sustainable use and protection of transboundary natural resources. GEBs will arise directly from the application of this approach which fully underlines the GEF project. Without the GEF activities, the Lake Chad Basin will continue to be impacted negatively by a weak LCBC with ineffective operational capacity and tools; inadequate regulatory and enabling frameworks for effective regional and national IWRM; un-harmonized knowledge to serve decision making; the impacts of climate change on vulnerable communities and ecosystems; inadequate monitoring of water, land, and biodiversity; inadequate and poor coordination of partner interventions leading to overlap and waste; and lacking awareness and techniques at local level on SLWM leading to further degradation of basin ecosystems.

The global benefits to be accrued through the project, understood as arising also from the baseline and LCB-NREE program, consist primarily in increased levels of multi-country cooperation for the management of the shared Lake Chad basin resources, increased water security, and preserved habitats. The main GEBs are as follows:

- Better application of IWRM principles that includes conjunctive management of surface and ground water, with enhanced effectiveness of the Water Charter, leading to basin conservation;
- Improved water flow into Lake Chad and a better valuing and balancing of water uses;
- Habitats, wetlands and biodiversity of local and global significance better conserved in the long run;

- Ecosystem services restored and sustained, with the wide range of environmental needs and economic activities arising from natural capital persisting over time;
- Sustainable livelihoods from IWRM and SLWM and hence poverty reduction for over 15 million inhabitants that rely directly on lake-based economic activities;
- Improved quantity and quality of water in the Lake Chad Basin with protected surface and groundwater supplies;
- Groundwater considerations systematically incorporated into surface water management;
- Halt current depletion trends of natural resources through IWRM and SLWM, resulting in improved land, pastoral and freshwater fisheries productive capacity;
- Quality information and data on the functioning of the fluvio-lacustrine and hydrological system, and the effects of climate change, generated to inform decision-making, leading to enhanced resilience at micro and macro scales;
- Reduced vulnerability to climatic change and variability, especially drought, through increased understanding, planning, and response strategies on the ground;
- Better balancing of differing water uses, reduced conflict and increased equitable benefits sharing.

A.6. Risks, including climate change, potential social and environmental risks that might prevent the project objectives from being achieved, and measures that address these risks:

Key risks to the project will relate to: institutional weaknesses of the LCBC and management challenges for large regional projects; competing priorities for socio-economic development vis a vis conservation that may compete for focus and financing; cooperation amongst stakeholders and partners; climate and ecological risks; uncertainty at local level in adopting change, new knowledge and techniques; and regional insecurity.

The project will specifically try to address problems that arose out of the implementation of GEFID 767 and PRODEBALT as expressed in their terminal evaluations. These included: inadequate project management and LCBC's limited capacity to execute projects directly; delays in project implementation, due also to lengthy procurement timeframes and slow pace of implementation of activities on the ground; deficient M&E systems and lack of flexibility for adjusting the project; and a security situation which caused difficulties with project staffing. Key lessons factored into the design of the Lake Chad Program are the focus on strengthening LCBC capacity, demonstration sites and pilots, as well as the involvement of communities in the implementation of the SAP through their participation in community level activities and capacity building at local level. Each of these will require heightened coordination, and the project will retain flexibility for adaptive management to needs and changes, given that other interventions are being developed concurrently. Hence, to avoid overlap and enhance effectiveness of all interventions for greater impact, project activities may need to be revised throughout and the establishment of a real mechanism for partner coordination will be highly effective. A strong M&E framework will be complemented by GEF tracking tools and AfDB supervisory missions.

Risk	Level	Mitigation measure
Institutional weakness of the LCBC to manage a complex program	M	Weaknesses in project management within the previous program were identified and lessons addressed in the design of PRESIBALT. Making the LCBC executing agency aims at its direct involvement in project implementation and enhancing its capacity, but with strong focus on training to address institutional deficiencies. The institutional strengthening component is meant to target these gaps and needs. More effective governance structures will arise from component 1. The program also aims to build LCBC's abilities in project and financial management.
Weak project management, including long procurement timelines and delays	M	Investment in human and financial resources, and building of appropriate capacity and knowledge systems, by strengthening human and technical capacities of project implementers and providers.
Limited capacity of stakeholders to implement IWRM and transboundary policies	M	Provision of IWRM guidance coupled with specific training to empower stakeholders at both national and regional levels. Demonstration activities in IWRM will additionally promote linkages with awareness raising and capacity development initiatives.
Inadequate regional cooperation	M	The coordination structure for stakeholders and partners will enhance

for good management of shared resources		collaborative aspects at basin level. A mechanism will be purposely strengthened at beginning of project implementation.
Duplication of activities by different partners due to multiplicity of programs on SAP implementation	M	Coordination with other donors and partners was sought during project design, PPG, and will continue during implementation. The coordination structure and better monitoring will help promote collaboration and synergy.
Key regional institutions and national governments do not work cooperatively	M	The project will emphasize a continued commitment to a regional approach and the benefits arising from cross-border IWRM, meant to balance competing needs and bring equitable benefits.
Government commitment is not sustained	M	Multi-stakeholder dialogue platforms established to share knowledge on equitable benefit sharing. This will help to increase and maintain interest and political will for basin wide programs.
Weak local stakeholder adherence to activities	L	Identify optimal demonstrations and IGA systems, relying especially on the development of adequate techniques and undertake sensitization campaigns targeting all stakeholders, including women. A community based approach for pilot demonstration projects will be promoted. The development of resilience and fragility control actions will secure benefits locally for increased belief in the program goals. Communication, participation and demand driven approaches will be strong elements during project implementation.
Weak ownership of methods of sustainable ecosystem management by States and communities	L	Sensitization of States and beneficiaries on effective participatory ecosystem management. Community based planning methods will be used to prioritize needs and allocate interventions with consent. Enhanced environmental awareness will prove additionally beneficial for long-term IWRM.
Demonstration projects become source of conflict locally	L	Activities will be established through a consultative process and all decisions will be promoted through a bottom-up consultation when possible. Strong focus on balancing water use amongst users and benefits amongst users, on mediation efforts, and awareness raising.
Climate change and variability at higher than anticipated levels leading to further degradation of ecosystems and biodiversity, and lowering water table of the lake	M	The region could face droughts but the project is flexible enough to function under drier conditions. The project has an underlying focus on resilience given the lake lies within the Sahel and depends on numerous environmental factors. The project will integrate tools and approaches for enhanced adaptation to climate change, with the overall goal of strengthening both the basin and community capacity to deal with changing climatic patterns. Enhanced data, knowledge and monitoring of hydrological and climatic aspects will additionally contribute to monitoring change and adaptive needs.
Ecological risks	M	GEF resources will be used to rationalize water use and measures will be taken to avoid invasive risks in demonstration activities and child projects through appropriate safeguards. Reinforced dialogue amongst LCBC Member States and baseline or regional project activities to monitor impacts and enhance adaptive capacity, such as the establishment of an early warning system, will help mitigate ecological impact and enhance cooperative decision making.
Weak M&E	L	Greater communication and knowledge management, and a strong M&E framework will be set up, also to enhance adaptive management and synergy.
Regional insecurity and political instability may affect implementation of activities at country level	M	Boko Haram is a huge concern in the region. The AfDB's secured access criterion was taken into account during selection of the program sites. Involvement of local civil actors in the implementation and monitoring of project activities will assist in reaching beneficiaries in target areas. The project will retain flexibility to deal with insecurity and change. The program as a whole is meant to enhance participation, equitable benefits sharing, and hence regional security in the long-term.

Ecological and socio-economic risks: The implementation of some baseline rehabilitation activities can create negative effects such as the risk of minor destruction of natural habitats and water/soil pollution stemming from an increased use of fertilizers and pesticides. Moreover, the irrigation schemes, the rehabilitation of degraded land, the support for agricultural sub-sectors, and the development of rural infrastructure may encourage immigration and foster additional overexploitation of resources. The development of some processing activities can also lead to the use of more firewood,

and hence deforestation. Increased trade and greater population mix can foster a rapid spread of communicable diseases such as HIV/AIDS.

Formulated in a context of advanced resource degradation, PRESIBALT will help to rebuild production capacities for sustainable development in the whole basin. Floodplain rehabilitation works will help to restore water flow of the main watercourses that supply the Lake. Anti-erosion works will limit silting and sedimentation in the Lake and help to recover degraded lands. The baseline program will also allow for creating a Transboundary Biosphere Reserve (TBR) and for listing the Lake as a UNESCO world heritage site which will encourage and help secure its protection. The GEF program also directly targets the rehabilitation of landscapes.

Mitigation measures of potential negative impacts were identified and noted in an Environmental and Social Management Plan (ESMP) that was prepared for PRESIBALT. It is noteworthy that the procurement of new meteorological and hydrological stations, and installation of manometers and GIS will help to better monitor certain environmental indicators in the basin and trends over time (e.g. water levels, desertification, deforestation). National coordination units, working closely with Directorates of Environment, will also participate in monitoring the environmental and social impacts of program activities and, where necessary, recommend appropriate corrective or compensatory measures. The environmental training and education program will help to sensitize the population on the implications of destructive practices and ensure their participation in applying appropriate biodiversity and environmental protection measures. Strong monitoring frameworks will be established to mitigate ecological risks, including sufficient safeguards and risk analysis.

Climate change risks: According to the Intergovernmental Panel on Climate Change (IPCC), climate change and resulting increases in temperatures and rainfall variability will likely have a particularly severe impact on agriculture in the Sahel. Droughts and flooding have increased considerably in the Sahel region since the 1970s. During implementation of PRODEBALT, activities under the component 'Adapting production systems to climate change' helped to mitigate some negative effects of climate change (including through reforestation, agroforestry and the promotion of alternative sources of domestic energy) and these actions will continue during PRESIBALT/GEF whose monitoring and readiness will be supported by ecological monitoring tools. Generally, PRESIBALT and GEF activities will have major positive impacts on ecosystem adaptation and reduced vulnerability to climate change. Besides, program activities will be aligned to national climate change adaptation plans of the five countries and contribute to securing production systems. The population's adaptation capacity will also be strengthened by developing climate change risk forecasting and management tools, putting in place agro-hydro-meteorological stations and supporting communities to mainstream climate-related information into the management of rural activities.

Regional insecurity: The Lake Chad Basin is marked by cross border insecurity resulting from the porosity of borders which influences socio-economic security and also resource rights. This cross border insecurity is part of historical socio-political and economic dynamics in this region, in addition to escalating armed activity in the area by Boko Haram. Such a context explains the added political interest in the Lake Chad region. The reduction in lake farming and fishing areas, combined with high population pressures (migration, population growth and influx of refugees) on resources, has created conflicts in the Lake Chad region which will intensify with growing resource scarcity following ecosystem degradation. The most common is conflict between farmers and stockbreeders resulting from the extension of farming to available wetlands and even to the livestock migration corridors and fallow lands. The uncontrolled increase in the number of fishing channels also creates disputes between fishermen and stockbreeders. The use of water, a shared resource, is a potential source of regional conflict in Lake Chad, additionally for irrigation projects. Most conflicts relating to natural resources are solved by local authorities (district and village authorities) through mediation or by agro-pastoral-conflict-management commissions. Enhanced cooperation between these conflict-resolution bodies, NGOs and the public authorities, as envisioned in the baseline, will contribute to better rural land management. Additional mitigation of regional conflict through balanced benefits sharing will alleviate such risks.

A.7. Coordination with other relevant GEF financed initiatives

Lake Chad and the LCBC have been and are the recipients of assistance from a number of technical and financial partners, primarily UNDP, FAO, UNESCO, EU, German Cooperation (GIZ, BGR), French Cooperation (AFD, FFEM), and World Bank. A number of projects and programs have been financed in connection with water resources

management in the Lake Chad basin, with technical support to basin countries and the Executive Secretariat of the LCBC. Hence, this and other projects in the region together focus on the implementation of the regionally agreed SAP and care must be taken to avoid duplication and better coordinate actions for impact value at basin level. The design of the AfDB Lake Chad program incorporates the lessons learned from the earlier GEF financed UNDP-World Bank project that resulted in the establishment of the TDA and the SAP, and previous AfDB programs in the region.

One critical activity of this AfDB-GEF project will be the strengthening of a sustained partner coordination mechanism to serve as a framework for consultation and coordination for greater aid effectiveness. The coordination will be between donors, NGOs, GEF agencies but also scientific and academic institutions in the region. Concurrently, the capacities of the international coordination unit will be strengthened to ensure that aid to LCBC is more effective in terms of alignment to existing strategies and shared responsibilities. To this end, the AfDB baseline will finance consultants to analyze the distribution and efficiency of aid and partnerships.

The GEF program will be coordinated at regional level with close links to the national level activities. As such, principles of coordination and implementation are as follows:

- alignment of activities to be implemented at the national level under common program results framework with agreement on shared and mutual benefits of a collaborating through the regional Lake Chad GEF program;
- complementing the identified local level project activities that build on national level results and address basin wide challenges and issues;
- supplementing multi-focal area strategies funding from the GEF and other partners involved in baseline projects, including support for climate change mitigation and adaptation programs that target rich biodiversity and productive landscapes in the Lake Chad basin;
- targeted support for transboundary landscapes of regional importance such as wetlands that require coordinated effort from Lake Chad basin countries and promote regional cooperation;
- leveraging synergies with programs funded by several development partners.

The regional project of the LCB-NREE will seek synergy with other projects and related initiatives in the region. The following important interventions are ongoing in the Basin:
- UNDP-GEF ID 4748: Improving Lake Chad management through building climate change resilience and reducing ecosystem stress through implementation of the SAP (currently under project preparation phase);
- World Bank supported the 'Lake Chad Development and Climate Resilience Action Plan' (LCDAP);
- GIZ: module 1 'Organizational advisory services for the Lake Chad Basin Commission', and module 2 'Adaptation to Climate Change in the Lake Chad Basin';
- German Federal Institute for Geosciences and Natural Resources (BGR): 'Sustainable Water Management of the Lake Chad Basin' program and module 'Advice on groundwater resources for the Lake Chad Basin Commission';
- French GEF: 'Lake Chad Preservation Project: contribution to the Lake development strategy';
- European Union (EU): 'The Integrated transboundary water resources of Lake Chad Basin';
- IUCN: Komandugu Yobe management plan implementation project, and under the BRIDGE (Building River Dialogue and Governance) project, support to Nigeria and Cameroon towards major advancements in the ratification of the Lake Chad Water Charter.

The AfDB-GEF project will primarily closely interact and coordinate with the planned UNDP-GEF project and the coming planning phases of the LCDAP. It will also use information arising from strategic assessments prepared under specific projects, for example by the German cooperation, on newly acquired information on groundwater and climate change. This is a timely opportunity to ensure programs align and shape a coordinated set of actions to advance support to Lake Chad, rather than duplicate efforts regionally and nationally. Relevant tools and experiences will be used to constantly inform project implementation, retain fluidity for better effectiveness, synergy and impact.

A close consultation process was conducted amongst AfDB, UNDP, WB, GIZ, BGR and in collaboration with the GEF IW team and the LCBC to avoid overlap in projects. A number of conference calls have been held in this regard in addition to meetings with local partner offices during AfDB missions to N'Djamena. Moreover, a donor coordination meeting was held in Frankfurt in February 2016 to maximize synergies and operational effectiveness during IW PPG finalization. This comprised detailed technical discussions with UNDP on respective IW activities, responsibilities and implementation modalities, based on relevant comparative advantages and delivering complementary activities. All

AfDB capacity strengthening activities are based on needs identified during project preparation phase (i.e. activity-related) and will be updated with new issues emerging during inception and implementation phases. These will be coordinated with on-going interventions of GIZ, BGR and forthcoming training planned by UNDP.

Consultations with UNDP centered on fine-tuning outputs related especially to capacity building activities for the LCBC, environmental monitoring and support to donor coordination. Agreement was reached on respective roles and division of tasks. It was also decided at the Frankfurt meeting that any remaining operational details would be finalized by the respective PIUs once both AfDB and UNDP IW projects are ready to start, and that a coordinated work plan will be prepared at inception time to assist the LCBC implement both IW projects more effectively and with better clarity. AfDB, UNDP and GIZ will ensure that training sessions are clearly defined and specified in annual work plans and approved by the LCBC. Project management units for all projects are/will be based in the LCBC Secretariat, which facilitates close cooperation throughout the implementation period. Both project managers of the AfDB and UNDP GEF projects will interact regularly and they and/or other representatives will take part in each project's steering committee meetings.

B. ADDITIONAL INFORMATION NOT ADDRESSED AT PIF STAGE:

B.1 Describe how the stakeholders will be engaged in project implementation.

Baseline project target areas, upon which the GEF project will build, were selected based on priorities defined in the LCBC FYIP. Criteria used in defining the areas included: (i) critical points where the operation will allow for improving the overall socio-ecological system; (ii) areas highly vulnerable to water erosion, representing an area of about 50,000 km2; (iii) value chain and inclusive development areas. The project's direct and indirect beneficiaries are 15.3 million people living on the banks of Lake Chad and its immediate hinterland. Women and the young will benefit from skills training, professional integration and income generating activities.

The project rests on the principle that sustainable and inclusive development can be achieved once key stakeholders and beneficiaries are sensitized and perceived as partners in natural resources management. Communication, consultation, and community participation during planning and implementation are key for the success of this project. If given the opportunity to identify and decide the types of projects that are in line with expectations and needs, communities are likelier to mobilize, participate, learn and sustain. For this reason, the project is based on a participatory approach. Representatives of local populations, national ministries and decentralized services were actively involved from the start, in the TDA, the definition of SAP priorities and subsequent AfDB program designs, including the PRESIBALT and GEF activities. Activities were defined in order to also meet the priority needs of beneficiaries as expressed in the FYIP and Water Charter. Not only were the populations and local authorities involved in the identification of activities, they also conveyed their own knowledge and perceptions of environmental phenomena.

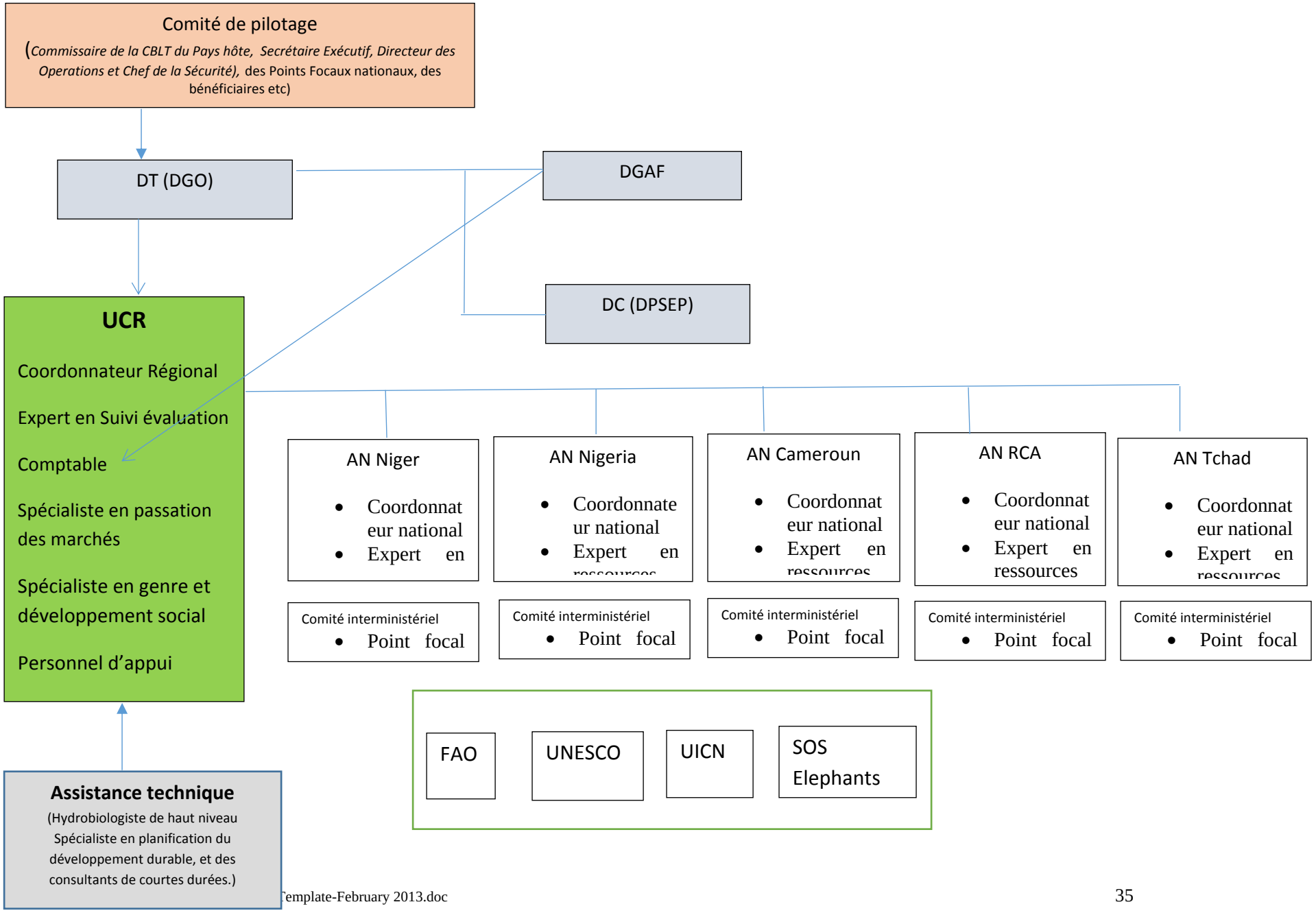
PRESIBALT has been developed on the basis of an integrated and participatory approach to increase ownership of the program by the beneficiaries. The program was designed following consultations (discussions and workshops) with various stakeholders (regional and national institutions, partners, communities, NGOs, etc.) that expressed views and concerns during the identification, preparation and appraisal stages on numerous aspects, such as water shortage problems, insecurity, access to social infrastructure, etc. The participatory approach which enabled stakeholders to own the objectives and technical choices of the program will be continued and strengthened during the baseline and GEF project implementation stage. Partnerships will be developed between the administrations, local communities, NGOs and producer associations for the implementation of activities and pilots. The riparian populations will be closely associated to the management of infrastructure and community facilities as well as local mechanisms for conflict management.

For the GEF component as well, as the original PFD highlighted, the ultimate program beneficiaries are the rural populations living in the Lake Chad basin whose livelihoods depend on its natural resources (farmers, herders, fishermen). The project aims at strengthening their capacities and awareness to assume responsibility in the protection of the basin, and their role in the enhancement of its productive potential. It will also help to improve livelihoods and diversify sources of income through the demonstration activities and also the subsequent national child projects.

PRESIBALT's sustainability rests also on beneficiary participation in the financing of community facilities (rural markets, water points, etc.), and related works (maintenance of water courses, soil protection, silt control, planting of fruit trees and forest plantations, etc.). Beneficiaries will take charge of the maintenance of socio-economic infrastructure and their management by committees. The simplicity of planned infrastructure and strengthening of beneficiaries' capacities are also consistent with an approach that fosters the sustainability of investments. The capacity building efforts aim at enabling the various stakeholders and beneficiaries to fully assume the functions and missions assigned them, and thus to thereafter sustain them. Moreover, the positive returns from locally appropriate sustainable resource practices, such as water harvesting and soil fertility techniques, will be clearly visible in increased yields and other communities and farmers will seek similar actions.

The GEF program and all its child projects will be implemented as part of the PRESIBALT and activities are fully integrated within the PRESIBALT itself. As such, the implementing modalities will be the same as for the PRESIBALT program (see chart below). This includes among others the same coordination unit at regional level, the same steering committee, and the same institutional arrangements at regional level and in the countries of the Lake Chad Basin. The project, both baseline and GEF, will primarily be implemented by the LCBC. A Regional Coordination Unit (RCU) will be set up within the General Directorate of Operations (DGO). Apart from the Regional Coordinator, the RCU staff will comprise a Manager/Accountant, Procurement Specialist, M&E Specialist, Gender and Social Development Specialist, and support staff. The staff will be sufficiently competent to conduct relevant regional and local studies that will underpin the resilience-building initiatives. It will benefit from technical assistance comprising a high-level hydrologist specialized in socio-ecological and resilience issues, a sustainable development planning specialist and short-term expert consultants, additionally for GEF activities. The RCU will rely on the Technical Departments of LCBC to implement activities in their respective spheres of competence. The General Directorate of Administration and Finance (DGAF) and the Directorate of Project Planning and Monitoring-Evaluation (DPSEP) will include accounting, procurement and M&E aspects into their institutional arrangement. At country level, Project Management Offices will be opened to coordinate the implementation of national level activities, working closely with technical state services.

Chart: Implementation organization of the PRESIBALT



At the level of the LCBC, a Steering Committee (SC) will be put in place to ensure project governance. It will comprise inter alia representatives of the LCBC Executive Secretariat (Executive Secretary, Director of Operations, and Head of Security), national Focal Points, the Donor Advisory Committee, the Inter-ministerial Technical Committee and Women and Youth Organizations. An inter-ministerial committee will be put in place in each country.

To implement specific activities of the baseline and GEF components, the LCBC will resort to specialized institutions and NGOs. UNESCO, SOS Elephants of Chad, FAO and IUCN have been identified to implement baseline biodiversity plans, eco-development and elephant protection activities, fisheries development plan and floodplain rehabilitation dimensions. Other institutions like the African Centre for Meteorological Applications Development (ACMAD) and the AGRHYMET Regional Centre will be consulted for data collection/standardization, observation networks and generation of climate-related information. Strong collaboration will be set up with UNDP, WB, GIZ, etc. for synergy. Communities will participate in the activities to develop and manage the social infrastructure, community interventions and IW demonstration pilots, while local NGOs will facilitate capacity building and awareness training, and the dissemination of practices and lessons learned. The LCBC will additionally work with government agencies in each country responsible for water resources management (ministries of water, environment, local government, LCB national institutions). Different components or activities will be led by different stakeholders as appropriate. The involvement of local organizations with expertise in the areas of intervention will be promoted also given sustainability and security-dictated needs. Different activities will be led by different stakeholders as appropriate and the various partners intervening as technical operators will send periodic reports to the national coordinators.

The LCB-NREE program targets subsistence smallholders and pastoralists most exposed to environmental degradation. Whenever possible, activities (particularly capacity building), such as the demonstration pilots, will be coordinated through civil society organizations to enhance reach and acceptance, with consideration of indigenous issues. Preference will be given to an intervention process based on prior commitment and effective participation of men and women from the communities concerned as well as the local authorities and decentralized technical services. These various players will benefit from project support to build their technical and organizational capacity and skills. During implementation collaboration with NGOs will be a key element of success as they can act as intermediaries for communities and be representatives of civil society in decision-making bodies; provide better informed services (needs assessments, awareness raising, monitoring); and be flexible to adapt in volatile contexts. Participatory monitoring and information sharing will also be strongly emphasized. By promoting beneficiary participation and access to decision-making, the project plays a strategic role in the development of social capital and approval.

Following consultations that took place in April 2015 at a stakeholder workshop within the framework of the GEF LCB-NREE prgram, a more recent AfDB mission to N'Djamena, Chad, in January 2016, was organized for the technical launching workshop of PRESIBALT and the validation of its GEF financed IW component. The AfDB-GEF team joined the mission to further consult with the LCBC and validate the GEF-financed regional activities of the Lake Chad program, so that GEF activities could thereafter be approved as part of the PRESIBALT. These activities have been developed based on consultative work and following close coordination with UNDP, GIZ, BGR, and World Bank, given concurrent program development in the region.

During the mission, in addition to the launching workshop and in the interest of enhanced coordination amongst development partners, the team met with key technical and financial partners with interventions in the Lake Chad Basin, in particular the World Bank (Resident Representative), the European Union, GIZ (technical assistant) and the French Development Agency (AFD Country Director). The IW regional component was thereafter presented by the AfDB-GEF team, discussed and validated by the LCBC, PRESIBALT national focal points (from the five countries), and stakeholders during a specific working session.

B.2 Describe the socioeconomic benefits to be delivered by the Project at the national and local levels, including consideration of gender dimensions, and how these will support the achievement of global environment benefits (GEF Trust Fund/NPIF) or adaptation benefits (LDCF/SCCF):

In a basin as complex and sensitive as that of Lake Chad, it is vital to integrate development and environmental strategies. Socio-economic and ecological resilience are two aspects that are fully interlinked in this region. Lake Chad ecosystems have strategic value for the entire region. The Lake basin provides water, food and a livelihood to more than

30 million people within the conventional basin, of which the majority earn their living through agriculture, animal husbandry and fishing. The IW project activities therefore need to be seen within the larger program and context, including that of the PRESIBALT and of the full LCB-NREE program with all of its child projects. It is not a standalone project and socio-economic benefits will accrue from consideration of the full program impact. The project places human needs at the center of the transboundary water system. The population's precarious living conditions and extreme vulnerability require efforts to center on: rehabilitating and enhancing the productive capacities of ecosystems; strengthening resilience of the population, especially of women and youth; and establishing stronger regional cooperation. An underlying framework based on IWRM will encourage coordinated development and cohesive management of water, land and other resources, in order to maximize socio-economic wellbeing while sustaining vital ecological services.

The declining water flows and quality, erosion and silting are adversely affecting the provision of ecosystem services in Lake Chad and its entire basin. As a result, farmlands have been disrupted and fish production has decreased. The amount of water flowing into Lake Chad depends primarily on changes in rainfall and climate in the basin (which affects tributary levels and catchment health), changes which themselves influence the state of natural resources and the human pressure exerted on the Lake. The more the basin is affected by, for example, drought, the higher the pressure on the Lake. Within a context of local populations with unsustainable agricultural practices that deplete natural resources, increased pressures on the natural asset base will only be exacerbated (increased farming on marginal lands, pastoral lands turned into cropping areas, deforestation, etc.). The implementation of the Lake Chad basin program will address various forms of resource degradation and promote techniques and measures for rational resource use therefore leading to increased production of food crops, fish, meat, fruit and wood, with explicit benefits for food security and poverty reduction. The restoration of agro and forest ecosystems will be instrumental in alleviating poverty in the Lake Chad basin.

The project aims to support a transformational process towards IWRM, protection of the environment and promotion of livelihoods. Its goal for transformational change is to modify human activities and institutions towards a more sustainable cross-border multiple use of basin resources and enhanced human wellbeing in this critical transboundary system. Lives in the Lake Chad basin are water-dependent. The project will thus contribute to sustaining livelihoods, securing food sources through protected natural capital, promoting equitable access to resources, reducing health risks and helping resolve or prevent conflicts over water.

In the region, food security depends substantially on fisheries and rainfed agriculture. Small-scale agricultural growth remains key for poverty reduction in the region. As such, increasing the productivity of the landscape and reducing the fragility of the natural resources base will have positive impact on socio-economic development at micro-scale. The stabilization and improvement of productive capacity through enhanced water use efficiency and sustainable land measures will improve food security. The primary outcomes of the project are expected to be: improvement of living conditions, strengthening of resource governance, enhancement of social cohesion, improved productivity of land, INRM, increased average revenues of households, reduced vulnerability of populations, and improved livelihoods, especially of women. The focus is on the realization of multiple environmental and economic benefits through enhanced basin health and thus production, climate change adaptation, resilience in basin communities, and conflict resolution.

The PRESIBALT design took into account concerns relating to social conflicts resulting from the use of consistently depleting resources. Thus, rehabilitated farmlands and floodplains, small village irrigation schemes, and pastures resulting from the interventions will allow communities to increase their output and incomes. The social dimension of resilience is enhanced by the socio-professional integration of vulnerable population segments, particularly women and youth, as well as the financing of 800 income generating activities, labor intensive works and enhanced value chains of the main commodities that feed intra-regional trade (fish, cereals, livestock etc.). Thousands of youths (30,500) will be trained in relevant trades, create green companies and will gradually cease to be recruiting grounds for armed groups. The program will also help to improve regional consultation and cooperation for IWRM, which will in the medium and long term reduce potential sources of conflict among competing nations. The project will promote appreciation of the value of the system locally and regionally.

The main socio-economic benefits expected from the PRESIBALT can be summarized as follows: (i) improved water availability in the Lake for human consumption, agriculture and livestock; (ii) improved fisheries numbers and production in the lake and its tributaries; (iii) reduced vulnerability to climate change and variability resulting from increased vegetative cover and improved ecological balance; (iv) sustained production and the development of non-timber forest products (NTFPs), such as honey and spirulina; (v) job creation and diversified livelihood base; (vii) improved food security, health, life expectancy, work load for women, and other benefits arising from increased social services and infrastructure.

IWRM helps to manage and develop water resources in a sustainable and balanced way, taking account of all the different social, economic and environmental interests. As such, activities in the PRESIBALT, IW and national child projects will be carefully monitored to evaluate the socio-economic benefits and environmental impacts. A participatory and integrated approach will be used to promote a balance in competing water uses, equitable distribution of benefits, involvement of both women and men, and community consultation in addressing SLWM. The project will additionally promote gender equity in management, governance, and capacity building, and the phasing out of fragilities.

PRESIBALT is classified by AfDB in Environmental and Social Category 2, according to its environmental and social safeguards procedures, given the nature of some works to be undertaken (flooding of floodplains, anti-erosion/siltation operations, small irrigated schemes, boreholes, roads, socio-economic facilities, etc.). It was subject to an environmental and social assessment, pursuant to Bank procedures and regulatory frameworks of the countries concerned. The main project activities aim to improve lake water inputs and quality, and preserve and develop ecosystems. An Environmental and Social Management Plan (ESMP) was also prepared. Formulated in a context of advanced degradation of endangered natural habitats/species, PRESIBALT will help to rebuild production capacities for sustainable development in the whole basin.

The environmental and socio-economic benefits arising from the LCB-NREE activities will be as follows:

- IWRM/INRM lead to landscape restoration and resource conservation which sustains productivity of agriculture and forest land, and maintains the provision of ecosystem goods and services;
- Improved functionality and stability of basin agro- and forest ecosystems, which concurrently improve hydrological functions in the Lake Chad basin;
- Innovative water management practices at community level enhance water use efficiency, water availability, soil fertility and productivity (including via IW pilots);
- Improved water quantity/quality and flow of tributaries into Lake Chad through reduced sedimentation/erosion and better land use practices;
- Ecosystem services better sustained, with the wide range of environmental needs and economic activities arising from natural capital persisting over time, including habitat services (biodiversity), regulating services (carbon) and productive services (soil, livelihoods);
- Sustainable and diversified livelihoods resulting from SLWM reduce poverty in the region;
- Improved living standards and health due to improvements in food security, nutrition, living conditions and availability of household needs (water, energy, socio-economic infrastructure, etc.);
- Carbon accumulation in biomass, soil and trees through increase in vegetation/tree cover and reduced land use practices that lead to GHG emissions;
- Positive impact on biodiversity, including in forests, national parks and buffer zones from improved transboundary cooperation;
- Institutions and communities with increased capacity to respond to climate risks and other shocks over time through increased awareness, planning and adaptive capacity;
- Increasing local and regional productivity and a reinforced and diversified agriculture increases food security and reduces poverty;
- Discernible improvements in landscape conditions and water levels in the long term, thus reducing environmental degradation trends in the basin.

Gender: The riparian countries of Lake Chad are among those with the highest gender inequality rates, ranging from the CAR, which was ranked 115th in the world in 2013, to Niger, ranked 146th the same year. The Lake region is among the poorest in Africa and poverty of women is heightened therein (63% of women in the extreme north of Cameroon are poor, compared to the national average of 33.4% in 2012). Women represent about 52% of the population and have a

heavier workload, compared to men, and have lower access to education, information, agricultural extension services, inputs and credit. Cereals are cultivated mainly by women and spirulina is harvested solely by women. Considerable land-related gender disparities also exist (women in the Nigerian zones of the project own only 4% of the lands). Fisheries activities are dominated by men but processing the catch falls on women. All the countries in the program area are subjected to considerable population pressures and high birth rates, with Niger ranked as the country with the highest birth rate in the world (7.6 children per woman). In the Lake region, the fertility rate of women is higher than the national averages (it stands at 7.3 children per woman whereas it is 5.7 at the national level and in the North-West region of Nigeria). This situation, coupled with other factors such as the limited ability to take decisions, limit the access of women, particularly nomadic women, to health care services. The program will contribute to reducing gender disparities in the Lake Chad basin. In the long run, almost 8 million women will benefit from the program activities. By facilitating the participation of women in activities and their access to land security, decision-making processes and investment, on the one hand, and by enhancing the organizational capacity of women producer groups, on the other, PRESIBALT plays a strategic role in promoting inclusive growth and improving the situation of women in the project's target area.

The program will work to mainstream gender in all its components, including through equitable access to productive resources and planned capacity building activities of the IW project. Women's integration and ownership will be promoted in basin resource user forums and a gender-sensitive monitoring and early warning system will be put in place. The baseline program will comprise a set of pro-women services centered on: the development of alternative livelihoods; creation of ecological value chains; processing of fishery and agricultural products; support based on their structuring in groups; suitable technical vocational and social trainings (including in reproductive health); promotion of access and land security of irrigated schemes (40% of land allocated to women's groups through local conventions); access to factors of production and technologies by reducing their work time and increasing their productivity; and access to outreach services and multi-purpose centers (60% of women among beneficiaries). A M&E system based on gender disaggregated data as well as on gender-related indicators will be set up. For example, the number of women involved in the demonstrations pilots and the number of women participating in the trainings will be promoted and monitored. The LCBC is currently a male dominated institution. The capacities of LCBC in gender mainstreaming will be strengthened by recruiting a gender and socio-economic development specialist in the Regional Coordination Unit to enhance training and awareness aspects.

Social: PRESIBALT will help to improve the low level of human development, and consequently, strengthen the overall resilience of the populations and their living environment by acting on its key determinants. It will boost human capital value by strengthening knowledge, fundamental rights and know-how of about 3 million people through sensitization, training and literacy of locals, including on sanitation. By widening access to, and encouraging the use of, primary health care infrastructure (300,000 beneficiaries every year) and quality drinking water (80,000 beneficiaries per year) and by maintaining these facilities, the program will ultimately reduce by at least 50% morbidity and mortality rates, especially those linked to water-borne diseases (cholera, diarrhea, typhoid fever and malaria). Furthermore, the construction of multi-purpose centers equipped with solar kiosks will strengthen some 80,000 beneficiaries' access to community services and energy at competitive prices and contribute to the adoption of new social habits and practice of new trades (installation and operation of solar kiosks). All these will improve employment prospects, living standards, and social conditions of the population. The employability of women and youth will also be enhanced through on-the-job training in the trades offered (30,000 per year) and technical training (500 beneficiaries per year) for promising trades chosen depending on the needs of the Lake economy. In addition, various projects and IGAs will consolidate or create about 150,000 jobs yearly. Newly created enterprises will foster the immediate generation of direct long-term and/or seasonal jobs linked to construction of infrastructure or their long-term maintenance. Lastly, the combination of works, vocational training and access to means of production for the poorest will generate additional income for the populations estimated at 50% minimum of current revenues, encouraging them to use social services like education and health and strengthen the value of social capital. PRESIBALT activities will not lead to population displacement. Rather, it is meant to stabilize populations in their natural environment, offering them alternatives to take charge of their own sustainable development.

B.3. Explain how cost-effectiveness is reflected in the project design:

A regional umbrella program will generate benefits for the overall environment while seeking to promote interventions for the ecological and socio-economic needs of each country. The Lake Chad program seeks to address problems faced within the Basin which are transboundary in nature as they extend over ecosystems, across landscapes and beyond local and national boundaries. The approach at the basin level entails the recognition of interrelated activities that have local and regional impact. A programmatic approach thus eliminates repetition in the learning curve and duplication of efforts from the Lake Chad Basin countries. The programmatic approach enhances complementarity in activities and across child projects. Building capacity at the regional level through the LCBC is also a lower cost option for ensuring retention of skills and institutional memory. Individual countries often lack the resources to sustain a dedicated lake basin team of experts and regional effort is required to raise such resources. The program will deliver skills for common problems and be able to monitor results. If the activities were to be implemented as only individual country initiatives there would be difficulty in creating noticeable impact for such a problem and uneven skills development would not survive frequent migration of communities across frontiers.

The programmatic approach is thus considered to be more cost-effective than stand-alone projects due to economies of scale, reduced transaction costs and optimization of synergies between activities, components and partners. The activities contribute to specific identified common problems for which a coordinated response can be better monitored and measured. Duplication of activities can more easily be avoided if the projects are all part of one program that puts strong emphasis on regional consultation. Lessons learned can also be more easily shared and applied for impact at scale. Implementation experiences and adopted best practices will also be shared between countries and between sub-regions in the same country.

The project is cost-effective in a number of ways:

- The project will be executed by the LCBC, thus reducing management tiers, enhancing cooperation, and ensuring close communication with stakeholders and beneficiaries. Oversight and monitoring by AfDB will further ensure operational effectiveness and expected cost savings.
- The project is based on and designed around the SAP and country NAPs which support country ownership. Numerous partners are committed to an effective implementation of the SAP, Vision and Water Charter. The AfDB-GEF project has been designed to maximize collaboration and avoid overlap with other interventions. Continuous consultations will help guarantee coordination and the tailoring of activities to the needs of the LCBC and basin countries.
- Project design has been fed by lessons learned from previous projects and a number of technical studies, thus seeking technical solutions based on realities on the ground and science. This helps optimize available resources and better mainstream issues such as fragility, resilience and gender.
- The programmatic approach will facilitate the implementation of child projects that will be inter-related with experience learning for a number of GEF focal areas.

The baseline project's economic benefits (tangible and intangible) stem from its supplementary value added induced over 20 years plus the additional agricultural, animal, fishery and forest production. This added value will contribute to raising the GDP of the countries concerned. The other benefits of the program include the creation of 150,000 jobs every year and improvement of households' resilience against climatic events, which helps maintain incomes even in the face of climatic shocks. The sustainability of project interventions will also be assured through effective involvement of private sector actors in baseline activities, including for processing, packaging, quality and market access issues. The simplicity of planned infrastructure and strengthening of beneficiaries' capacities are also consistent with an approach that fosters the sustainability of investments. The innovative aspects of the GEF project are related to: (i) the impact of interventions based on the elimination of production and human-induced constraints; (ii) technical innovations for drylands; and (iii) enhanced institutional and community awareness and capacity to sustainably manage biodiversity and resources together.

At the institutional level, sustainability is ensured by the LCBC and by the alignment with the Vision 2025 and the SAP. The reinforcement of LCBC's coordination role and strengthening communication and collaboration with the national bodies will ensure better sustained regional partnership. At the community level, institutional sustainability will be guaranteed by beneficiary participation in the development and validation of management plans for fisheries, forests and land management as well as by the capacity development programs with strong dissemination of good practices and

guidelines. The operational and maintenance risk is tackled by the simplicity of the infrastructures envisaged and decentralized technical services.

Investing in SLWM to control and prevent environmental degradation in the wider landscape is an essential and cost-effective way to deliver multiple GEBs related to ecosystem functions. The project will ensure sustainability of RE technologies based on the deployment and diffusion of reliable, least-cost renewable energy technologies that address the natural resource endowments of the country.

Other Options or Alternatives Considered	Brief Description	Reason for Rejection
Separate national projects	These projects are based more on national perspectives rather than on an integrated ecological logic where due regard is given to how the overall river-lake system operates and seeks proper management for a shared benefit of the resources.	A regional approach, based on an integrated ecological and development vision, is most effective and in line with the key principles of the Water Charter and SAP.
Approach targeting one sub-sector only (agriculture, livestock, agro-forestry or fisheries)	Such an approach aims to develop only one sub-sector: stockbreeding, agriculture, agroforestry or fisheries.	To improve resilience of rural households and economies of the Basin, a multi-sector eco-systemic approach is required based on an integrated and holistic view of the entire landscape (IWRM).
Conservation or development	A critical question for Lake Chad is on whether conservation of the lake as a highly valuable global resource or local socio-economic development should be prioritized. Sometimes gains in one means losses in the other sphere.	Livelihoods and basin ecosystem health go hand in hand. This project rests on the critical linkages between conservation and development.

C. DESCRIBE THE BUDGETED M &E PLAN:

Monitoring and Evaluation (M&R): The overall LCB-NREE program M&E at the regional level will be carried out by the LCBC Executive Secretariat through the Department of Planning, Monitoring and Implementation of Projects. Specific indicators based on a results framework will be monitored and reported on a quarterly basis to assess the progress and achievements of results. National level M&E will be led by national coordinators and M&E specialists that will be identified in each country. These will define simple specific indicators of a technical and organizational nature for the national components, using the indicators featuring in the overall program results framework thus ensuring compatibility. The program will also undergo external M&E annually by the supervisory Ministries of the Countries and the Basin Observatory, with support from AfDB.

Monitoring will occur at project and program level. As required in AfDB operations, the LCBC Secretariat and the national coordination units will prepare quarterly progress reports, programs and annual reports, annual budgets, as well as progress reports. In addition, the national Environment Departments will provide half-yearly environmental monitoring reports. The annual progress reports combine both AfDB and GEF reporting requirements. As is current practice with baseline projects, regular joint supervisions and mid-term review missions will be carried out by the Bank (and if possible, other partners) for periodic monitoring in order to make the necessary adjustments for achievement of the objectives and outputs at various levels. The program will be closely monitored by the AfDB Field offices in Cameroon, Nigeria and Chad. At the end of the program, the Governments and LCBC will prepare a completion report.

An inception workshop will be held within the first three months of project start with participants being those with direct roles in project implementation, AfDB country office staff, relevant regional technical policy and program, advisors, as well as other stakeholders (including community representatives if possible). The inception workshop is crucial to building ownership for the project activities, discuss responsibilities and to plan the first year annual work plan. Demonstration activities will be discussed as well.

The program will be implemented on the basis of a modular approach to take into account the security context prevailing in certain areas around Lake Chad. M&E will also include adaptive management so that the project retains flexibility when needed allowing harmony with partner interventions (especially the SAP update) and following a theory of change approach. Successful experiences will be collected and used as examples and benchmarks for other regions sharing similar challenges should. A common information system and the consolidation of knowledge is needed in order to enhance the uptake of available and new knowledge.

M&E will be based on the following:

- Project Start-up/inception workshop;
- Inception report;
- Project Implementation Reports (PIR);
- Periodic progress and M&E reports (quarterly and annually);
- Evaluation missions and site visits;
- Mid-Term Review (MTR);
- LCBC and NC reports;
- Terminal Evaluations;
- GEF tracking tools.

To better illustrate the M&E aspect, the following table shows outputs and responsibility at each step:

Report type	**Prepared by**	**Responsibility**	**Preparation frequency/period**	**Submission**	**Budget ($)**
1. Activity reports	PIU Staff	PIU Coordinator	Per Reporting cycle agreed with the GEF	AfDB	5,000
2. Progress reports	PIU Staff	PIU Coordinator	Per Reporting cycle agreed with the GEF	CBLT secretariat	15,000
3. Project Implementation Report (PIR)	PIU Coordinator	PIU / AfDB	Before June 30, of a set fiscal year	AfDB / GEF Secretariat	AfDB staff
4. Mid-Term Review report (MTR)	Independent consultant	PIU / AfDB	Per Reporting cycle agreed with the GEF	AfDB/ GEF Secretariat	10,000
5. Project Completion Report	PIU Coordinator	PIU Coordinator	End year of project completion date	AfDB / GEF Secretariat	AfDB staff
6. Terminal Evaluation	Independent consultant	PIU / AfDB	After project completion but no more than 12 months after	GEF Evaluation Office	20,000

The M&E arrangement will help to decide the level of physical (implementation rate overall and by component) and financial implementation (commitment rate, disbursement rate of ADF, the State and other financial partners) of the program. It will be fed with information coming mainly from control/supervision missions and progress reports. The monitoring of physical (commitments and disbursements) versus expected outputs will allow for ensuring the timeliness of the program. Specialized M&E consultants will assess program effects and impacts (socio-economic, environmental, gender, etc.) under the direction of DGPSP and the LCBC.

Progress reports will include, but are not limited to, the following:

- Progress made toward project objective and project outcomes, with indicators, baseline data and final targets;
- Project outputs delivered per project outcome (annual);
- Lessons learned/good practices;
- Expenditure reports;
- Risk and adaptive management, with considerations for revisions needed;

- Portfolio level indicators (i.e. GEF focal area tracking tools) on an annual basis.

The Terminal Evaluation and Project Completion Report will summarize the results achieved (objectives, outcomes, outputs), lessons learned, problems met and areas where results may not have been achieved. 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 results.

Learning and knowledge sharing: The baseline and GEF projects will together assist LCBC to consolidate the regional database by installing a regional center for processing statistical, geomatic and satellite data (agricultural, climatological, limnometric, piezometric and socio-economic) to allow for regular collection of necessary data and information for a better knowledge of the Basin's water resources and environment. The program will strengthen LCBC's capacities to optimally use all aspects of knowledge acquired and will finance stakeholder forums to better share the information collected. Spatially-distributed SAP-relevant information will be shared with meteorological and agro-hydrological monitoring networks. Hydrological information will be supplemented by other precise data on water resource use as well as regional/local water status reports (evapotranspiration, soil water assessment, areas under cultivation, areas under irrigation) in order to identify the risks of natural disasters and allow for a rational and proactive management of such risks. A system for sharing knowledge on program activities and IWRM will be set up through regular dissemination on the LCBC website and IWLEARN in order to build on and manage the knowledge and experience acquired. Results from the project will be disseminated within and beyond the project intervention zone through existing information sharing networks and forums. This will allow stakeholders to identify, analyze, and share experiences that might be beneficial in the design and implementation of similar future projects. IWLEARN will provide for the sharing of experiences and replication of successful practices in other regions, especially those confronting similar issues and challenges.

Key performance indicators for the PRESIBALT and LCB-NREE program will be, inter alia (for IW related indicators): adoption/implementation of policy and legal regulations and plans at national and local levels that show progress towards IWRM/INRM and SAP targets; water use efficiency improvements; protected wetlands; inclusion of aquifers, groundwater and climatic change issues in strategic frameworks and operations; capacity enhancement for incorporating climatic variability/change and groundwater concerns in SAPs and other regulatory frameworks; (for larger program): improvement of water inflows and balance; completion rate of works and infrastructure; increase in production (t/Ha); rates of increase in cereals, fish, livestock products, etc.; reduction in food and nutritional insecurity; drop in infections related to water-borne diseases; rate of increase of project target revenues and average household income; number of trained men, women and youth; increase in revenue earned by women; level of women's involvement in decision-making bodies; and involvement of NGOs and community organizations. The Department of Planning, Monitoring and Evaluation of the LCBC Executive Secretariat, the Basin Observatory and the national services will monitor these indicators. To ensure this, a strong internal and external M&E mechanism will be set up.

The GEF increment will additionally contribute to monitoring key environmental indicators based on GEF focal areas and their GEBs that will be aggregated at program level. For national child projects, these will include for BD: intact vegetative cover and degree of fragmentation in production landscapes measured in hectares; for LD: change in land productivity, changes in vegetation cover in targeted areas, increase in land area under SLWM in targeted areas (hectares, reported by crop, range, forest, wetlands), improved livelihoods in rural areas (farmer income); for CCM: tons of CO2 equivalent avoided (both direct and indirect), change in carbon accumulation rates in biomass and soil, compared to baseline (tC/ha); for SFM: land (hectares) covered by forest, reforestation area, emissions avoided from deforestation and forest degradation.

PART III: APPROVAL/ENDORSEMENT BY GEF OPERATIONAL FOCAL POINT(S) AND GEF AGENCY(IES)

A. RECORD OF ENDORSEMENT OF GEF OPERATIONAL FOCAL POINT(S) ON BEHALF OF THE GOVERNMENT(S):): (Please attach the Operational Focal Point endorsement letter(s) with this form. For SGP, use this OFP endorsement letter).

NAME	POSITION	MINISTRY	DATE *(MM/dd/yyyy)*
Mr. Justin NANTCHOU NGOKO	Director Minister's Cabinet CAMEROON	MINISTRY OF ENVIRONMENT AND NATURE PROTECTION	9/15/2011
Mr. Gustave DOUNGOUBE	Adviser CAR	MINISTRY OF WATER, FORESTRY, HUNTING, FISHERY AND ENVIRONMENT	9/12/2011
Mr. Gaourang MAMADI N'GARKELO	Directeur de Cabinet du Ministre de L'Environnement CHAD	MINISTERE DE L'ENVIRONNEMENT, DE LA QUALITE DE VIE ET DES PARCS NATIONAUX	9/12/2011
Mr. Zouladaini MALAM GATA	Commissioner in Charge of Development NIGER	MINISTERE DE L"ECONOMIE ET DES FINANCES	9/07/2011
Mrs. Olabisi Bolanle JAJI	Director NIGERIA	FEDERAL MINISTRY OF ENVIRONMENT POLICY ANALYSIS, MONITORING AND INSPECTORATE DEPARTMENT	9/08/2011

B. GEF AGENCY(IES) CERTIFICATION

This request has been prepared in accordance with GEF/LDCF/SCCF/NPIF policies and procedures and meets the GEF/LDCF/SCCF/NPIF criteria for CEO endorsement/approval of project.

Agency Coordinator, Agency Name	Signature	Date *(Month, day, year)*	Project Contact Person	Telephone	Email Address
Mahamat ASSOUYOUTI AfDB		03.15.2016	DIOP BAMBA	+22520262753	A.DIOP@AFDB.ORG

ANNEX A: PROJECT RESULTS FRAMEWORK (either copy and paste here the framework from the Agency document, or provide reference to the page in the project document where the framework could be found).

Please refer to p. vi of the PRESIBALT Appraisal Report.

ANNEX B: RESPONSES TO PROJECT REVIEWS (from GEF Secretariat and GEF Agencies, and Responses to Comments from Council at work program inclusion and the Convention Secretariat and STAP at PIF).

Comments	AfDB Responses (May 2016)
Comments from GEF Secretariat on LCB-NREE PFD (original date of review 15/03/2012)	
Please, remind that many comments were made during the review to be clarified at CEO endorsement. Please, notably refer to the comments made in the cell 28 entitled "Items to consider at subsequent individual project submissions for CEO endorsement", and explain how these points are included in the PPG.	All comments have been addressed. Some were addressed at PPG approval stage (as noted), but most during preparation of the CEO endorsement documents as described below. Each response has been adapted to the respective child project. Comments on appropriateness of program activities and budget justifications were addressed in the request for PPG (dated 18/5/2012). STAP comments were to be included as tasks to be performed during the preparation of the program, and this has been done.
Cell 28 Items *1) Please, confirm the cofinancing and document in detail. It should only involve activities that are aligned with the GEF objectives.*	These clarifications were part of the tasks under the PPG and have been addressed during the design of the program. The co-financing has been confirmed under a new baseline project (PRESIBALT). Due care has been taken to align all activities with the GEF5 IW strategy, primarily Objective 1.
2) Please, provide a deep analysis of project baseline, 1) confirming the incremental use of GEF resources and 2) reassuring that no controversial projects are used to leverage GEF financing.	A deep analysis of the new project baseline has been provided, in addition to a section on the incremental use of GEF funds. The GEF resources are not used in projects considered controversial, but only for activities aligned to the GEF IW strategy. The PRESIBALT is not controversial itself, and it forms a very suitable baseline for the GEF increment.
3) Please complete a deep risk analysis highlighting institutional issues, implementing arrangements, reputation risks, and ecological risks (notably to be sure that GEF resources are used to rationalize water uses, or that all measures are taken to avoid the use of exotic species with invasive risks).	A deep risk analysis has been included, with a table highlighting risk, level of risk, and mitigation measures, and additional text explaining some key issues in more depth (implementation risks, ecological and socio-economic risks, climate change risks, regional insecurity). Demonstration activities will focus on water use efficiency and conservation. Strong monitoring frameworks will be established to mitigate ecological risks (for e.g. to prevent invasive phenomena in demonstrations and child projects for agriculture or pastoral activities).
4) Please make sure that the IW funded subprojects follow the IW GEF 5 strategies and only include eligible activities following GEF 5 IW objective 1. In this early form, the descriptions do not offer enough details to understand if this will be the case (activities such as following could be considered: community based drip irrigation, community based IWRM demonstrations, Wetland management and protection as well regional IWRM knowledge management would be among eligible activities)	Strong attention has been given to making sure the IW regional project, its activities and demonstration pilots are eligible under the IW GEF5 strategy and align to its long-term goal. IW funds will only be used for the regional umbrella project and its activities are consistent with IW-1, with demonstration pilots focused on water use efficiency and SLWM for the protection of ecosystem services. Table B and section A.5 clarify the activities in detail. Child projects will be aligned to the LD, BD, CCM, and SFM focal areas as appropriate.
5) We would expect to see specific details of the baseline projects for each focal areas and how those baseline project align with the objectives of the respective GEF focal area. We would expect to see how the incremental funding would build on the baseline project to achieve global environmental benefits.	These comments have been taken into account in each child project falling under the program. For the IW project, the incremental reasoning and GEBs are explained in detail in section A.5, to show how GEF funding builds on the baseline and other partner projects.

6) Using the principal of incremental reasoning, specific carbon emission benefits and other benefits must be estimated and presented. These benefits estimates should be specific to the types and scope of each intervention for each project. Also, by using the principal of incremental reasoning, the GEF funding for each intervention should be justified.	Please see national child projects for the comment on carbon emission benefits. It does not apply to IW regional child project. GEF funding from IW is justified in section A.2 and A.5.
7) Investment mechanisms to demonstrate or procure renewable energy systems under component 3 should be spelled out in clear and specific detail, with the types of systems to be used, the number, and estimated unit costs. The design and structure of investment mechanisms in each country should be documented.	This has been done during the preparation of child project components on renewable energy that use CCM funds. Please refer to child projects. Not relevant to IW project.
8) Please, detail the monitoring at project and program level.	Monitoring will occur at project and program level as described extensively in section C. Both a plan at project level with specified indicators and means of collecting information and a strong M&E strategy at program level will be developed. Specific monitoring and reporting requirements are mandatory by the AfDB as well (progress reports, supervision missions, final evaluations, etc.), and these will be supplemented by the GEF tracking tools.
9) Please provide EIA to make sure that the suggested pumping of groundwater resources will not affect the lake and groundwater level negatively.	An EIA or an Environment and Social Management Plan (ESMP) depending on the environmental classification for the project is necessary for all AfDB projects. An ESMP was prepared for PRESIBALT to define potential risks and mitigation measures. Furthermore, EIA will be done by the LCBC, analyzing and reducing risks arising from any intervention in the basin (including on groundwater withdrawal, large irrigation and agricultural development projects, etc.)
Please refer to the comments in the STAP review and responses from AfDB, especially on dealing with potential tradeoffs, master wood energy plan, and baseline for carbon estimation, and be clear the PPG includes activities to address the rating of "major revision". *STAP proposes significant improvements or has concerns on the grounds of specified major scientific/technical omissions in the concept. If STAP provides this advisory response, a full explanation would also be provided. Normally, a STAP approved review will be mandatory prior to submission of the project brief for CEO endorsement. The proponent should provide a report of the action agreed and taken, at the time of submission of the full project brief for CEO endorsement.*	Some key issues in the STAP review such as the additional assessments required, baseline information and identification of climate adaptation measures have been addressed during the PPG. The action plan requested will be prepared and targets and indicators elaborated upon in line with the updated SAP. Furthermore, the six child projects will be made available to STAP for review. Please see below for detailed addressing of STAP comments.
Table B: *Please explain in the text how the activities are going to provide the basic elements to develop the four components of the Program.*	Comment was addressed in PPG request document. The four PFD components remain relevant despite the baseline change and can be considered overarching program components. Each child project then explains its own activities in detail and how they relate to the overall program.
Please explain what are the expected results of this PPG: we understand that one regional project document will be prepared and potentially five national projects. However, the phrasing is not fully clear for us. Please, clarify.	Comment was addressed in PPG request document. The outputs of the PPG phase are five (5) national projects and one (1) regional project, all linked under the overall LCB-NREE program. The regional project uses only IW funds.
The collection of information to identify the baseline scenario, the limiting factors, the risks, the existing approaches related to nature resource management and conservation, the energy consumption patterns, the political, institutional, organizational,	The comment was noted with thanks and taken into account during preparation of CEO endorsement documents. It is still relevant with the new baseline.

and technical capacities of all stakeholders at regional and local levels, are typically eligible under a PPG.	
Confirm that a M&E and a capitalization strategy will be developed.	A M&E plan is developed for all AfDB projects and will also be developed for the LCB-NREE Program and each of its child projects. Please refer to section C on the description of M&E and knowledge learning.
CCM and SFM/REDD+ objectives require credible estimates of carbon benefits, or greenhouse gas benefits more broadly if appropriate. Please, confirm that this analysis will be conducted.	These comments are not relevant to the IW project but are addressed in the child projects that use CCM and SFM/REDD+ funds.
Some type of carbon monitoring system is expected. Please confirm that this item is included in the tasks.	
These elements have to be reflected in the ToR of the different specialists (carbon monitoring, renewable energy activities). Which specialist will be the experts on forest carbon issues, and which on renewable energy activities?	Comments were addressed in PPG request document. PPG development of TORs for consultants/experts reflected these issues and needs.
Please, explain how the tradeoffs will be handled if the activities are done in separate analysis.	
Please remind that the funding from CC is for mitigation. Confirm that climate resilience issues are considered.	Comment was addressed in PPG request document. Climate resilience is a key cross-cutting issue of the IW and child projects but CCM funding for mitigation activities is only used for eligible activities in the child projects, mainly on renewable energy. The IW project also reflects consideration for climate change adaptation, critical in the Sahel, and given the recent preparation of the LCDAP.
The activities 1-5 are welcome in a PPG (institutional analysis, component studies, environmental and social analysis, climate risk analysis, stakeholder consultation).	This comment was noted with thanks and we confirm use of PPG for these activities and analyses during project preparation. Activities included stakeholder consultations, field visits, and a workshop with countries to define needs and activities.
Please note that GEF resources cannot be used for coordination and management costs for a PPG (see p.2 and p.6).	Comment was addressed in PPG request document.
2. Component studies: please note that the activity or the result entitled "project document finalized" is not eligible per se under a PPG. The PPG has to be used to prepare all preparatory activities and provide the basic information for the project document. But the project consolidation and finalization are typically activities that are expected from the Agency or the cofinancing.	Comment was addressed in PPG request document.
6. As mentioned above, it is not possible to include GEF resources in the coordination budget (here $56,000). Moreover, $200,000 are shown as cofinancing for this component. We have difficulties to figure out how $200,000 of cofinancing can be assigned to management costs while "only" $130,000 are assigned to technical activities and consultations.	Comment was addressed in PPG request document.
We understand that the development of such program is difficult and need enough resources. However, we expect that the programmatic approach will also be a way to be cost efficient and reduce transaction costs. Based on the PPG costs for	Comment was addressed in PPG request document.

individual projects, we are expecting a PPG under $400,000 (equivalent to $70,000 for each individual project and $50,000 for the regional project). Please, revise.	
Table C *Please, provide the breakdown between focal areas and per country. We remind that the PPG is financed by Country STAR allocations used for the program. The table C has to reflect the detailed breakdown per focal area and per country.*	Comment was addressed in PPG request document.
Table D *- The part devoted to international consultants seem high. Please, justify or decrease the budget.*	Comment was addressed in PPG request document.
GEF resources cannot be used to finance coordination (cf $40,000 in the table D).	Comment was addressed in PPG request document.
We understand that the program needs to develop consultation at regional, national, and local levels. Please, justify the amount of $80,000 for consultations.	Comment was addressed in PPG request document.
Please note that there are discrepancies in the cofinancing between the table B and the table D (respectively $330,000 and $150,000).	Comment was addressed in PPG request document.
Annex A: *Please revise the last column (tasks to be performed). The tasks are not described for all consultants (p.6 and all consultants p.7).*	Comment was addressed in PPG request document.
80 weeks of international consultants at US$ 3,000 seem a high amount. Please, justify or reduce.	Comment was addressed in PPG request document.
Comments from Council (originally dated November 2011)	
Work Program: Comments From Council Members (Reference GEF/C41.08)	
Germany Comments Germany approves the Work Program June 2011. Attached, please find our comments on several of the PIFs and PFDs with the request to take these into account during the drafting of final project documents. We welcome every opportunity in which close cooperation between GEF projects and German bilateral cooperation as well as cofinancing agreements are feasible.	AfDB noted this comment and requisite by Germany and wishes to underline that the work of German cooperation agencies in the Lake Chad region (primarily GIZ and BGR) were closely taken into account, in order to build on and progress forward (for example, on groundwater). Close cooperation was sought during project preparation and will be continued during implementation, with a specific activity on strengthening a partner coordination platform within the LCBC to ensure donor/partner collaboration and synergy for a more streamlined SAP implementation.
French Comments The goal of the program is to conserve the water and agro-sylvo ecosystems of Lake Chad Basin through improved governance and integrated ecosystem management to ensure the sustainability of the resources and improved food security and water quantity and quality. It aims at mitigating the threats to the stability of the ecosystems, the rehabilitation of degraded lands and the conservation and sustainable exploitation of the biodiversity. It will also contribute, through demonstration actions such as plant cover restoration measures, to reduce land degradation and boost carbon sequestration reserves. It will address the causes of soil	AfDB would like to thank France for its positive feedback and favorable reaction. Please note that AfDB reviewed programs by the French cooperation (mainly FFEM and AFD) in the Basin to inform its own program design and that collaboration and synergy will be pursued throughout implementation, as expressed above. Mahamat please add on decision making tool

impoverishment through participatory protection of source heads (notably in CAR) and banks. It will provide significant world ecological benefits through biodiversity restoration and increased fuel energy capital. To complete this program (AfDB/GEF) and another current program (Prodebalt), FFEM is expected to implement a new project that aims to support the Lake Chad Basin Strategic Action Program. The objective of the project is to develop a decision making tool for the lake sustainable management. FFEM contribution is 0.8 M Euros. **Opinion: favourable**.	
Comments from STAP (original date of review 8/10/2011)	
II. STAP Advisory Response Based on this PIF screening, STAP's advisory response to the GEF Secretariat and GEF Agency(ies): **Major revision required**	The AfDB made strong note of the STAP conclusion that major revision was required of the LCB-NREE program, and appreciated the input and guidance. All comments and issues were carefully considered during project preparation and addressed throughout the document text and as outlined below. An initial AfDB response to the STAP review dated 2/11/2011 (this could be provided if requested) has been supplemented with more updated information and responses made during preparation of the CEO endorsement documents (May 2016 responses here below).
III. Further guidance from STAP Lake Chad presents a unique challenge to science, regional governments and the local communities. Lake Chad has declined to 1/20th of its original size due to a combination of climatic change and inappropriate natural resource management. A series of attempts have been made to conserve and regenerate the Lake Chad basin. The current GEF project is a part of the long chain of international interventions. *There is too much focus on the institutional, organizational and management aspects of the LC basin and very little serious scientific assessment of causes and solutions that are needed to inform interventions.*	The design of the program has been based on SAP priorities and gaps that were identified during project preparation, based on analyzing partner interventions and the current knowledge context. AfDB agrees with STAP that Lake Chad presents a unique challenge to science, development and policy making and this has been emphasized in the IW CEO endorsement document, with a description of the natural, climatic and anthropogenic factors that underlie its fragility and variability. Each of these factors have been considered during preparation of the project and its components. The program supports and improves on the actions of previous AfDB programs (PRODEBALT and of AWF) by implementing guidelines arising from feasibility studies that were prepared under these programs, such as those aimed at checking silting and water erosion, and the Water Charter itself. In recent years, other partners have moved forward on work and studies related to groundwater (BGR, EU) and climate change adaptation (GIZ), which have changed the 'knowledge baseline' (technical, scientific, institutional) of the project. This has informed the choice of activities for the AfDB-GEF project in order to progress forward, building on science as well as avoiding duplication given the long chain of international interventions in the region. Furthermore, additional recent assessments, such as an expert group review by the Institut de Recherche pour le Développement (IRD) and a joint environmental audit, were made in 2014 and 2015 respectively with up to date and advanced information on the Lake Chad Basin. During GEF project design, these important studies and interventions have been carefully considered and consultation with basin stakeholders, partners and the scientific community was sought. Such coordination will continue throughout implementation for a better utilization of science and knowledge in enhancing project ecological and socio-economic impact. GEF incremental activities will build upon the baseline and recommendations emerging from recent studies to implement some of these measures. There is a strong focus in the IW regional project

	(component 3) on knowledge generation, standardization and monitoring to inform better decision making based on scientific data, technical aspects and a better understanding of ecosystem degradation trends, causes and solutions (remaining in line with the IW strategy). This is meant to complement activities towards the enhancement of institutional, organizational and management aspects of the lake basin (component 1).
The hydrological changes are the driving forces for the natural resources associated with the lake i.e. fisheries, recession cultivation on the lake floor and green vegetation for livestock. During recent years, the cycles of natural resources have become fairly predictable in the southern basin, but vulnerability has increased greatly in the northern basin (e.g., Lemoalle, Jacques, Bader, Jean-Claude, and Leblanc, Marc (2008) The variability of Lake Chad: hydrological modelling and ecosystem services. Proceedings of the 13th IWRA World Water Congress 2008 In: 13th IWRA World Water Congress 2008, 01-04 September 2008, Montpellier, France). *In the southern basin, the water is permanent in the center of the basin and in some pools of the archipelago, while the northern basin is often inundated. These conditions are significantly impacted by climate variability and change and make management of natural resources in the basin particularly challenging. Such management requires a high level of coordination and co-operation among riparian countries where conservation demands may often be in conflict with the livelihoods functioning.*	The focus of component 1 specifically targets enhancing capacity, institutions and cooperation for a better application of IWRM within the basin (regionally, nationally and locally), with added considerations for climate change and variability. The project seeks to ensure water is managed in a balanced and equitable manner in the basin by targeting regulatory needs and enabling aspects, including much stronger cooperation amongst countries and at regional level. Such an approach will also be central to the demonstration activities of component 2. The IW project builds on, and is meant to improve, efforts undertaken in in the baseline PRESIBALT, on-going and previous projects, such as the PRODEBALT itself and the GEF/UNDP/WB project which established the TDA and SAP. Furthermore, the conservation vs. livelihoods aspect is specifically discussed in the text. In the highly fragile Lake Chad region, preservation of the lake basin goes hand in hand with socio-economic development. The project aims to target both for longer term sustainability of this critical habitat, with a strong emphasis on ecosystem-based management that addresses the nature/human interface.
STAP notes that the proposed Program builds on the previous Lake Chad project (GEF ID 767, Reversal of Land and Water Degradation Trends in the Lake Chad Basin Ecosystem) which produced a transboundary diagnostic analysis and a draft Strategic Action Program (SAP), while the Terminal Evaluation reviewed the progress made towards implementation of the SAP. The present Program document (PFD) notes that the principal lessons learnt from the previous project are discussed in the barriers to implementation section. In the light of the lessons learnt and STAP's screening of the present Program, significant strategic and operational concerns are noted by STAP which therefore requests a major revision of the Program document prior to its endorsement by the CEO. This is particularly important in light of the 'moderately unsatisfactory' rating given the prior project at entry. In addition, a major shortcoming of the present PFD is that it ignores the serious degradation that is ongoing in Lake Chad, with inflows continuing to decline. *Rather than planning to 'sustainably develop' Lake Chad, the priority should be to restore or rehabilitate it. In addition, the security conditions in several Lake Chad countries further challenge the prospects for progress. Thus, this project should benefit from all the previous experiences of various agencies including GEF as well as scientific literature available.*	The AfDB duly notes these observations and agrees. Yes, the program builds on and benefits from previous experiences and interventions, scientific literature, lessons learned and continued needs. It specifically addresses lessons learned and barriers emerging from GEFID 767 and PRODEBALT, as explained in section A.3 and A.6, including related to actual implementation capacity. The fact that 6 child projects were to be developed following the one PFD document explains the generality of some issues and descriptions. Details are presented in the child projects which help respond to all STAP concerns on strategic and operational shortfalls and needs. If STAP believes that the PFD ignored the serious degradation that is ongoing in Lake Chad, with inflows continuing to decline, this critical aspect of the Lake Chad basin has been discussed further in this CEO endorsement document. Indeed, the project aims to target those very degradation trends, an aspect that underlines considerations for stronger IWRM and application in demonstration pilots. PRESIBALT itself is also explicitly focused on water inflow, with actions on desilting and anti-erosion. Furthermore, rather than only planning to sustainably develop Lake Chad, the priority with GEF funds is to eventually restore or rehabilitate the basin over the long-run. Degradation of the basin forms the backbone of GEF project concerns. The full AfDB-GEF program, with the IW regional project acting as the glue for national level interventions, is designed to promote sustainable solutions to identified problems and adaptive management within an environment of change and insecurity (political, climatic, etc.). The baseline PRESIBALT and GEF project both are fully aware of the security concerns

	and will be implemented through a "modular" and "conflict-sensitive" approach which allows for implementation of activities in the conducive regions based on annual insecurity assessments, and adaptive management.
STAP suggests the consideration of the following issues:	
1. Drivers of degradation and loss of ecosystem services of LC basin: Given the scale of the project, there is a need for a systematic assessment of the ecosystem services provide by the lake, the forest and the agricultural systems and the decline, if any, of the ecosystem services. There is a need for a good understanding of the drivers of degradation of ecosystem services, rather than generic statements of causes of loss of ecosystem services.	The drivers of resource degradation and loss of ecosystem services are also considered by AfDB a critical concern essential to project design. This has been addressed in the IW project description and an in-depth analysis of the Lake Chad context and drivers is available in the baseline project appraisal report and its technical annexes. Drivers were thus most definitely considered. Recent assessments and work on Lake Chad that discuss these very issues (by IRD, EU, GIZ, etc.) were carefully scrutinized to better understand the root causes of loss of ecosystem services to better inform design and potential for impact. The IW project also has a strong focus on protecting and sustaining ecosystem services both for the environment and for livelihoods. This issue emerges strongly from the IW project.
2. Baseline scenario: A detailed baseline scenario quantifying the extent of degradation and loss of ecosystem services, extent of fuelwood extraction, emissions of CO2 from degradation of forests and projections into the future under the no-project scenario, is necessary.	This is indeed important, and again, this has been addressed in the child project descriptions and an in-depth analysis of the Lake Chad baseline scenario is available in the PRESIBALT appraisal report and its technical annexes. Baseline scenario descriptions will be provided for each child project, with a description of how the incremental funding builds on the baseline project to achieve the GEBs and other benefits and, in relevant child projects, specific carbon emission benefits.
3. Transboundary governance: From a scientific and technical perspective STAP has used the 2008 TDA and SAP (available via IWLearn) to inform itself of the major concerns and possible interventions. It is encouraging to note that the Lake Chad Basin Commission (LCBC) Executive Secretariat through the Department of Planning, Monitoring and Implementation of Projects will monitor and evaluate the projects. However, at the strategic level the principal observation to be made is that without the LCBC having increased delegated executive authority over decisions affecting relevant catchment management in all participating countries, the potential for success of the Program remains in question. Indeed the PFD appears not to address sufficiently the issue of the adequacy of the mandate and enforcement powers of the LCBC, acknowledged to be amongst the root causes for lack of action since the LCBC's formation. STAP advises that no amount of scientific and technical information will result in achieving the environmental targets without more explicit political support for the LCBC to take difficult decisions regarding for example, water, livestock and agricultural management, and advises the Program proponent to clarify the role and powers of the LCBC and measures to be taken to address any shortfall in its executive authority. In addition, LCBC should seek competent technical partners from the region, such as through CORAF in the case of agriculture and livestock improvement.	This comment is well-taken, and yes, despite its important mandate, the LCBC's effectiveness is inadequate and needs much reinforcement. It is critical that the LCBC be strengthened in its management and enforcement capacities in order to effectively enhance transboundary governance. This is the motivation behind component 1 which aims to sustainably enhance the LCBC's management capacity, financing and stronger frameworks for a more effective implementation of its mandate. The LCBC will be a prime target for institutional strengthening and awareness raising, augmented by its role as project executer. The project will also support the continued process for the adoption and implementation of the Water Charter, taking all the necessary measures to encourage ratification of by the remaining Member States. As a binding framework, this would be most effective in improving transboundary governance and the influence of the LCBC as regional body. A stronger communication plan is also envisioned to increase political support for the LCBC. Effort will be made, as explained under component 3, to strengthen links and partnerships between the LCBC, national research systems, and international partners (such as OSS, AGRHYMET, CILSS, CORAF) for enhanced data assessment and improvements on the ground (environmental, socio-economic, and agricultural).
4. Trade-offs: There is a tendency throughout the PFD to imply that in all cases of environmental management whether for use of water, biodiversity or other natural resources there are always win-win outcomes, whereas in fact hard decisions may be necessary to negotiate and to enforce tradeoffs regarding	The issue of trade-offs is well-noted and the IW project specifically discusses the issue of competing priorities for socio-economic development vis a vis conservation that may compete for focus. Trade-offs need to be managed. The long-term goal of the baseline and its GEF IW incremental activities is to realize

natural resource exploitation. For example, regarding hydrology, the Program envisages an enhanced water observation network, including more piezometers etc. in order to assemble sufficient information to inform decisions about water allocations/management. However, the PFD in places appears to pre-empt acquisition of an adequate information base regarding use of groundwater. For example, in section F the statement Use of ground water through pumping will enable livestock to access water without having to graze in the wetlands presupposes that surface/groundwater interactions are favourable. They may not be and experience from other basins in Africa indicates that groundwater extraction has both short term seasonal and long term decadal consequences on surface water availability. For the five priority Ecosystem Quality and Water Resource (EQWRO) objectives arising from the SAP and the additional objectives taken from the NAPA and other convention-related instruments the proponents are advised to review their assumptions concerning the causal chain and therefore priorities assigned to the proposed projects envisaged under the Program. This is important to enable interventions that can sensibly be conducted in parallel, such as reforestation, cookstove technology, improving power distribution, to proceed, but others such as increased use of irrigation, sustained fishing effort, review of existing dams, are inter-dependent and require a more structured approach.	local and global benefits through actions that help sustain the integrity of the Lake basin and its ecosystem services, underlined by a concern for climate resilience and food security. Such an objective necessitates both a national and regional approach that considers the lake landscape and a working governance system needed for collective decision-making and benefit-gaining in both development and conservation aspects. It also necessitates a theory of change approach to achieve desired long-term goals. Measures will target the barriers to such a system and building knowledge and capacity at local, national, and regional levels for resilience and adaptive management in the face of impending change and growing resources scarcity. Adaptive capacity will need to address all socio-economic, demographic, climatic, political, security, environmental, etc. pressures and risks that face the basin, and their collective responsibility in resource depletion. Given the fragility of the Sahelian landscape, the role of Lake Chad as an oasis within a dryland, and rising regional security concerns, it is ever more critical to secure this ecosystem for all the benefits it brings, environmentally and socio-economically. The project, despite a baseline change, still follows the original guidelines of the PFD but the specificity of activities is better defined, with added consideration for new assessments and interventions as explained, which make cooperation and synergy ever more necessary. As an example, and to respond to STAP concerns, activities related to groundwater have been revised from the PFD given the actions on this in recent years by BGR and the EU. The project contributes to the IW goal also by promoting knowledge on the links and interdependencies between water uses (agriculture, surface and groundwater, biodiversity, etc.), climate, and livelihoods needs. A system of regular quantitative and qualitative monitoring of water resources at the basin scale will also be set up. An assessment of groundwater use and protection, building on BGR work, will be made (e.g. transboundary aquifer delineation, aquifer recharge management/options, use of groundwater for drinking or irrigation). Consistent EIA will make sure that, for example, future pumping of groundwater resources or large irrigation projects will not affect the lake and groundwater levels negatively. The final STAP comments on appropriately structured parallel interventions are taken up in child projects as well.
5. Targets and Indicators: The PFD contains indirect references to targets and indicators in the TDA and SAP documents, but includes in the PFD Results Framework not a single quantifiable target, yet in Annex 2 some specific targets are given not clearly consistent with the Framework. This is a complex multi-focal area Program and all parties must be clear on the directions and targets. STAP therefore advises that progress will be hard to monitor without well thought out actions to be developed from the existing SAP and other strategic plans and documented regarding interventions and targets. Barriers noted from the Terminal Evaluation Report of the previous project include the lack of an Action Plan which was to be developed from the SAP. Although this barrier is stated in the PFD surprisingly there is no mention of a Program component that will address this barrier. STAP requests that the	Agreed. The Lake Chad SAP is currently being updated and before specific indicators can be determined, this update needs to be finalized and shared with AfDB. The program will also have a strong M&E framework to address the concerns by STAP to give the program a direction and better monitor progress and impact. In line with the updated SAP, the project envisages the development of a new Five Year Investment Plan (for after 2017), which operationalize the SAP and act as action plans.

Program be revised to include the production of an Action Plan which will include the necessary logical framework with indicators necessary to organize the work stated in the Program Result Framework. STAP further requests that the necessary SAP Action Plan be peer reviewed as a pre-condition for its implementation.	
6. Climate change risks: A number of studies [For example, FAO Report (2009) on Adaptive Water Management in the Lake Chad Basin-Addressing current challenges and adapting to future needs, World Water Week, Stockholm, August 16-22, 2009] have reported that change in climate, drought and declining rainfall as critical factors contributing to decline and loss of LC. This issue is not adequately addressed in the current project, except for passing references. There are many studies available which need to be reviewed and if necessary, new modeling studies may have to be conducted to assess the role of changing rainfall and drought in the recent decades as well as projections into the future. The NAPAs mentioned for the 3 countries are only preliminary attempts to assess the adaptation needs. Given the scale of the problem and the scale of the project, a good scientific modeling and assessment is necessary to understand the causes of degradation of LC, particularly the role played by drought and declining rainfall. And other climatic changes.	Climate change risks have been much better presented in the IW CEO endorsement document, both in the baseline explanation and the risks section (as required also by AfDB). The IW project is underlined by considerations for climate change and variability, and by measures to enhance adaptive planning. A number of studies were reviewed and analysed during PPG phase, including the mentioned FAO report and a recent Climate Change Study: Adaptation to Climate Change in the Lake Chad Basin made by GIZ, to better inform project design. Furthermore, the project includes an activity on establishing a hydrological monitoring system and simulation model developed to monitor changes in water flow, lake levels, and to assess impact under various future scenarios, including climate change and variability (drought, rainfall, etc.).
7. Adaptation to climate change: A few adaptation measures are mentioned. However, given the scale of the problem and the project, there is a need for a systematic assessment of various adaptation options and prioritization of the interventions to address the climate risk challenge. For example, a FAO Report (2009) on Adaptive Water Management in the Lake Chad Basin-Addressing current challenges and adapting to future needs, World Water Week, Stockholm, August 16-22, 2009] A number of studies are available which have considered adaptation to climate change in the LC region. b. SAVING LAKE CHAD, Based on Proceedings of Sirte Roundtable, Libya, 17th December 2008, Prepared by Engr. I. K. Musa With Contributions from Mohammed Bila, Boubakari Mana and Chaibou Mahaman on behalf of the Lake Chad Basin Commission (LCBC) and International Commission of Irrigation and Drainage (ICID).	Please see above comments which are applicable. Resilience and adaptive management motivate much of the IW project (in line with the IW strategy and its Objective 1), while climate change adaptation will also be a focus of select demonstration projects.
8. Renewable energy technologies: There is very little discussion on the extent of contribution of fuelwood extraction to degradation of ecosystem services of LC. The PIF mentions about the renewable energy alternatives but there is a need for a serious consideration of the renewable energy options, assuming cooking is one of the dominant uses of fuelwood or charcoal leading to loss of forests.	This issue is addressed in relevant national child projects. It is not applicable to the regional IW project.

ANNEX C: STATUS OF IMPLEMENTATION OF PROJECT PREPARATION ACTIVITIES AND THE USE OF FUNDS[10]

A. PROVIDE DETAILED FUNDING AMOUNT OF THE PPG ACTIVITIES FINANCING STATUS IN THE TABLE BELOW:

PPG Grant Approved at PIF: **$210,000**			
Project Preparation Activities Implemented	***GEF/LDCF/SCCF/NPIF Amount ($)***		
	Budgeted Amount	***Amount Spent Todate***	***Amount Committed***
Institutional Analysis	25,000	25,000	25,000
Component Studies	60,000	60,000	60,000
Environment and Social Analysis	54,000	54,000	54,000
Climate Risk Analysis	60,000	60,000	60,000
Stakeholder Consultations	11,000	11,000	11,000
Total	210,000	210,000	210,000

ANNEX D: CALENDAR OF EXPECTED REFLOWS (if non-grant instrument is used**)**

Provide a calendar of expected reflows to the GEF/LDCF/SCCF/NPIF Trust Fund or to your Agency (and/or revolving fund that will be set up)

N/A

[10] If at CEO Endorsement, the PPG activities have not been completed and there is a balance of unspent fund, Agencies can continue undertake the activities up to one year of project start. No later than one year from start of project implementation, Agencies should report this table to the GEF Secretariat on the completion of PPG activities and the amount spent for the activities.

ANNEX D: RESULTS-BASED LOGICAL FRAMEWORK

Program Title: Lake Chad Basin Regional Program for the Conservation and Sustainable Use of Natural Resources and Energy Efficiency (LCB-I
Countries: Lake Chad Basin Commission (LCBC) – Cameroon, Chad, Nigeria, Niger, Central African Republic

Purpose of the Program: To maintain the ecosystem services in the Lake Chad Basin by conserving the water and agro-sylvo ecosystems and e
resources in a context of energy efficiency and food security

	PERFORMANCE INDICATORS					
RESULTS CHAIN		**INDICATOR**	**BASELINE SITUATION**	**TARGET**	**MEANS OF VERIFICATION**	**RI M**
IMPACT	Improvement of the living conditions of the populations living in the Lake Chad Basin	Basin dwellers living below the poverty line (%)	59% in 2013	40% in 2020	Source : United Nations Statistics, Observatory Reports, Country PRSPs	
	Strengthening of shared-natural-resources governance and enhancement of social cohesion	Natural-resource-governance index (1-100)	39 in 2013	50 in 2020		
EFFECTS	Productivity of ecosystems is improved	Monetary income/km² of flooded plains	0	EUR 3,125/km²/yr in 2020	Source : Annual Reports of LCBC Secretariat	**Ri** fre in
	Integrated water resources management	Number of countries having ratified the Water Charter	3	5		**M** in fig ad re se in pr
	Average revenues of households have increased	Average incomes of male and female farmers	XAF 196,110 (2014)	XAF 294,172 (2020)		
	Vulnerable populations have been reintegrated in the socio-economic fabric and long-term jobs created	Number of rural jobs created	8,400 (2012)	50,000 (2020)		
	Livelihood of women improved	Ratio of female poverty rate in the project area/national averages	1.8 (2014)	1.2 (2020)		

OUTCOMES	**Nigeria: LCB-NREE Nigeria child project: Comprehensive and integrated management of natural resources in Borno State**					**Risk:** The vagaries of the weather can lead to the degradation of ecosystems and biodiversity **Mitigation Measure:** Financing of resilience actions, fight against fragilities, creation of a RBT and inclusion of the Lake in the world heritage sites **Risk:** Weak ownership of methods of sustainable land and ecosystem management by States and communities **Mitigation Measure:** Sensitization of States and residents on effective participatory ecosystems management
	BD 2.1: Increase in sustainably managed landscapes and seascapes that integrate biodiversity conservation	Land area (ha) under agro-forestry practice		500 in 2020	Annual Reports of LCBC Secretariat	
	LD 1.2: Improved agricultural management	Land area (ha)		2,000 ha in 2020	Project reports	
	LD 2.2: Improved forest management in drylands	Number of farmers trained on SLWM		5,000 in 2020		
	CCM 3.2: Investment in renewable energy technologies increased	Forest area (ha) under SFM		500 ha in 2020		
	SFM 1.2: Good management practices applied in existing forests	Number (MW)		30 in 2020		
		Number of solar cook stoves distributed		200,000 in 2020		
		Forest area (ha)		1,000 ha in 2020		

	Cameroon: LCB-NREE Cameroon child project: Improving agro-pastoral systems in the Far North region of Cameroon LD 1.2: Improved agricultural management	Number of innovative SLWM practices Number of transhumance corridors (ha) Land area (ha) under SLWM		10 50 300 ha	Source : Statistics Office	**Risk**: Weak stakeholder adherence to activities **Mitigation Measure:** Identify optimal IGA systems, relying especially on the development of existing techniques and undertake sensitization campaigns targeting women associations in particular
	Chad: LCB-NREE Chad child project: Integrated management of natural resources in the Chadian part of the Lake Chad basin BD 2.1: Increase in sustainably managed landscapes and seascapes that integrate biodiversity conservation LD 1.2: Improved agricultural management LD 2.2: Improved forest management in drylands CCM 3.2: Investment in renewable energy technologies increased SFM 1.2: Good management practices applied in existing forests	Land area (ha) under revegetation, small reforestation, and gallery forest recovery along the Chari-Logone and Lake Chad Land area (ha) Number of farmers trained on SLWM Number (Investments in RE alternatives) Forest area (ha)		500ha in 2020 1000 ha in 2020 5,000 in 2020 150,000 improved cook stoves, 200 improved Chorkor ovens 3,000 ha in 2020	Source : LCBC progress reports, Programme progress reports	**Risk**: Institutional weakness of LCBC and insufficient regional cooperation **Mitigation Measure**: LCBC Capacity-Building Programme and support for implementing the Water Charter **Risk**: Long procurement timelines and delays **Mitigation Measure**: Strengthening of the human and technical capacities of providers

	Niger: LCB-NREE Niger child project: Improving sustainable management of natural resources in Niger's Diffa region					**Risk**: Population displacement within Niger due to changes in the availability of water and fishery resources in Lake Chad and the Komadogu-Yobe river
	BD 2.1: Increase in sustainably managed landscapes and seascapes that integrate biodiversity conservation	Land area (ha) under SLWM measures		500 ha		**Mitigation measures**: The whole Niger project focuses on enhancing productivity, water availability and quality through water use efficiency and better land management measures. The long-term benefits are meant to mitigate this growing trend.
	LD 1.2: Improved agricultural management	Land area (ha) under agroforestry and regeneration practices		800 ha		
	LD 2.2: Improved forest management in drylands	Land area (ha) under improved and sustainable farming		400 ha		
	CCM 3.2: Investment in renewable energy technologies increased	Number of irrigation units powered by solar pumps		100		
	SFM 1.2: Good management practices applied in existing forest	Number of trainings		60		

	CAR: LCB-NREE CAR child project: Enhancing agro-ecological systems in northern prefectures of the Central African Republic					**Risk**: Projects become source of conflict locally, particularly between farmers/herders and nomadic/sedentary communities
	BD 2.1: Increase in sustainably managed landscapes and seascapes that integrate biodiversity conservation	Land area (ha) under sustainable and resilient farming		500 ha		**Mitigation measures**: Activities will be established through a consultative process and all decisions will be promoted through a bottom-up consultation when possible. Strong focus on balancing use and benefits amongst users, on mediation efforts, and awareness raising.
	LD 1.2: Improved agricultural management	Land area (ha) under SLWM		1,000 ha		
	CCM 3.2: Investment in renewable energy technologies increased	Number of RE investments deployed		40,000 solar cook stoves 10 Biogas digesters 5,000 households using energy alternatives		
	SFM 1.2: Good management practices applied in existing forest	Number of person trained to develop alternative livelihood activities based on biodiversity-friendly NTFPs, agro-forestry and sylvo-pastoralism		25 producer groups (at least 12 women and 5 youth)		

	LCB-NREE IW child project: Regional project for the conservation and sustainable development of Lake Chad: enhancing transboundary cooperation and integrated water resources management in the Lake Chad Basin IW 1.1: Implementation of agreed Strategic Action Programmes (SAPs)incorporates transboundary IWRM principles (including environment and groundwater) and policy/ legal/institutional reforms into national/local plans	Number of new countries having ratified the Water Charter Updated SAP/TDA (number) Number of pilot demonstration investments Number of LSBC staff trained Number of early warning system in place		2 1 2 by 2020 50 1		**Risk**: Institutional weakness of the LCBC to manage a complex program **Mitigation measures**: Weaknesses in project management within the previous program were identified and lessons addressed in the design of PRESIBALT. Making the LCBC executing agency aims at its direct involvement in project implementation and enhancing its capacity, but with strong focus on training to address institutional deficiencies. The institutional strengthening component is meant to target these gaps and needs. More effective governance structures will arise from component 1. The program also aims to build LCBC's abilities in project and financial management. **Risk**: Duplication of activities by different partners due to multiplicity of programs on SAP implementation **Mitigation measures**: Coordination with other donors and partners was sought during project design, PPG, and will continue during implementation. The coordination structure and better monitoring will help promote collaboration and synergy. Please see project document for more details

KEY ACTIVITIES			
	Nigeria: LCB-NREE Nigeria child project: Comprehensive and integrated management of natural resources in Borno State: **1.** Integrating sustainability and conservation into production landscapes to improve ecosystem functioning and local livelihoods; **2.** Scaling up INRM and alternative energy measures to maintain the flow of goods/services from agro- and forest ecosystems; **3.** Improving and consolidating knowledge, data and monitoring **Cameroon: LCB-NREE Cameroon child project: Improving agro-pastoral systems in the Far North region of Cameroon: 1.** Improving agro-pastoral management and resilience; **2.** Enhanced planning and capacity building in sustainable NRM at local level ; **3.** Improving and consolidating knowledge, data and monitoring **Chad: LCB-NREE Chad child project: Integrated management of natural resources in the Chadian part of the Lake Chad basin**: **1.** Rehabilitation of productive landscapes and habitats in the Chadian sub-basins; **2.** Promoting renewable energy (RE) technologies/ practices and INRM to maintain ecosystem goods/services; **3.** Improving and consolidating institutional capacity, knowledge, and monitoring **Niger: LCB-NREE Niger child project: Improving sustainable management of natural resources in Niger's Diffa region: 1.** Improving agro-pastoral management and productivity in drylands; **2.** Natural habitat protection to ensure ecosystem services from the landscape; **3.** Improving and consolidating knowledge, data and monitoring **CAR: LCB-NREE CAR child project: Enhancing agro-ecological systems in northern prefectures of the Central African Republic: 1.** Enhancing agro-sylvo-pastoral systems; **2.** Promoting energy and livelihood alternatives to safeguard ecosystems and food security; **3.** Improving and consolidating knowledge, data and monitoring **LCB-NREE IW child project: Regional project for the conservation and sustainable development of Lake Chad: enhancing transboundary cooperation and integrated water resources management in the Lake Chad Basin: 1.** Strengthening capacity, institutions and cooperation for IWRM in the Lake Chad basin; **2.** Pilot demonstrations of technologies and practices in water use efficiency and conservation; **3.** Improving and consolidating knowledge, data and monitoring.		**GEF Funding (US$):** Nigeria : 4,141,429 Niger : 3,288,782 IW : 6,287,037 Chad : 2,557,942 CAR : 2,557,942 Cameroon : 1,479,952 **Total** : 20,313,084