



REQUEST FOR CEO ENDORSEMENT

PROJECT TYPE: Full-sized Project

TYPE OF TRUST FUND: GEF Trust Fund

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PART I: PROJECT INFORMATION

Project Title: LCB-NREE Niger child project: Improving sustainable management of natural resources in Niger's Diffa region			
Country(ies):	Niger	GEF Project ID: ¹	9497
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:	21.09.2016
GEF Focal Area (s):	Multifocal Area	Project Duration(Months)	60
Name of Parent Program (if applicable):	Lake Chad Basin Regional Program for the Conservation and Sustainable Use of Natural Resources and Energy Efficiency (LCB-NREE)	Project Agency Fee (\$):	263,104
<ul style="list-style-type: none"> ➤ For SFM/REDD+ <input type="checkbox"/> ➤ For SGP <input type="checkbox"/> ➤ For PPP <input type="checkbox"/> 			

A. FOCAL AREA STRATEGY FRAMEWORK²

Focal Area Objectives	Expected FA Outcomes	Expected FA Outputs	Trust Fund	Grant Amount (\$)	Cofinancing (\$)
(select) BD-2	Outcome 2.1: Increase in sustainably managed landscapes and seascapes that integrate biodiversity conservation	Output 2.2 National and sub-national land-use plans (number) that incorporate biodiversity and ecosystem services valuation	GEF TF	502,453	3,043,547
(select) LD-1	Outcome 1.2: Improved agricultural management	Output 1.2 Types of innovative SL/WM practices introduced at field level Output 1.3 Suitable SL/WM interventions to increase vegetative cover in agroecosystems	GEF TF	730,000	5,037,483
(select) LD-2	Outcome 2.2: Improved forest management in drylands	Output 2.2 Types of innovative SFM practices introduced at field level Output 2.3 Suitable SFM interventions to increase/maintain natural forest cover in dryland production landscapes	GEF TF	731,681	4,550,190
CCM-3 (select)	Outcome 3.2: Investment in renewable energy technologies increased	Output 3.2 Renewable energy capacity installed	GEF TF	502,453	3,043,547
(select) SFM/REDD+ - 1	Outcome 1.2: Good management practices applied in existing forests	Output 1.2 Forest area (hectares) under sustainable management, separated by forest type Output 1.3 Types and quantity of services generated through SFM	GEF TF	822,195	4,986,733
Total project costs				3,288,782	20,661,500

B. PROJECT FRAMEWORK

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.

Project Objective: To enhance agro-sylvo-pastoralism and landscape productivity in Niger's Diffa region by rehabilitating agro and forest ecosystems in support of food security and environmental protection

Project Component	Grant Type	Expected Outcomes	Expected Outputs	Trust Fund	Grant Amount (\$)	Confirmed Cofinancing (\$)
1. Improving agro-pastoral management and productivity in drylands	TA	<p>1.1 Enhanced agro-pastoral practices and technologies are adopted, resulting in sustained productivity and reduced vulnerability</p> <p>1.2 Functionality and cover of agro-ecosystems maintained, with efficient soil, water and energy conservation measures supported</p>	<p>1.1.1 Improved and sustainable farming with application of conservation agriculture on 400 ha</p> <p>1.1.2 Development and revegetation of grazing areas over 200 ha, with transhumance corridors demarcated</p> <p>1.1.3 Seeds of drought-resilient food crop or fodder varieties disseminated in 10 rural communities, with cereal/feed banks established and managed by committees</p> <p>1.1.4 Community awareness raising program on improved agro-sylvo-pastoralism and ecosystem protection: 5 training sessions per year targeting farmers, pastoralists and fishermen in target communes</p> <p>1.2.1 Rehabilitated landscapes, including productive areas of the Komadogu-Yobe basin: 500 ha restored by SLWM measures (crop rotation and diversification, soil restoration and dune stabilization techniques); 300 ha covered by firebreaks and windbreaks</p> <p>1.2.2 Increased vegetative cover regenerates degraded soils, rangelands, and forestlands: 300 ha under agro-forestry in crop or grazing systems; 300 ha under natural farmer managed regeneration of woodlands for fuelwood and fodder</p> <p>1.2.3 Small-scale irrigated perimeters at village level: 100 drip irrigation units powered by solar pumps functional</p> <p>1.2.4 Increased access of people and livestock to water: 30 pastoral wells and boreholes operational; rainwater harvesting introduced in 10 communities</p>	GEF T	1,080,000	7,185,000
2. Natural habitat protection to ensure ecosystem services from the landscape	Inv	2.1 Environmental protection measures applied locally to safeguard biodiversity and ecosystems (croplands,	2.1.1 Reforestation to biologically protect natural terrestrial and aquatic habitats from erosion, silting and general degradation: 300 ha in the Komadogu-Yobe sub-basin planted with vegetation and trees, with select conservation set asides established	GEF T	1,642,500	9,611,500

		<p>rangelands, wetlands, forestlands)</p> <p>2.2 Improved management of dryland forest, with reduced pressure on forest resources and more secure provision of their services</p> <p>2.3 Increase in sustainably managed landscapes, with integrated and participatory planning and management of resources</p>	<p>2.1.2 Preservation of woodlands through indirect actions based on low carbon technologies for domestic energy needs: 60,000 improved cook stoves distributed</p> <p>2.1.3 Renewable and low carbon technologies for productive and domestic purposes adopted, with 3,000 households using energy alternatives to traditional approaches</p> <p>2.2.1 SFM practices introduced in target sites to maintain natural forest cover: two community forest plantations established for timber and non-timber products</p> <p>2.2.2 300 ha of natural forest (savanna) are sustainably managed through the development of 4 management plans</p> <p>2.2.3 Community forestry guidelines defining pressure points produced</p> <p>2.3.1 Sustainability and conservation integrated into landscape management: land-use plans incorporating grazing areas, community forests and ecosystem services valuation developed and adopted in 10 communities</p> <p>2.3.2 50 community NRM committees established for conservation areas, water points and community forests</p> <p>2.3.3 Capacity building for NRM committees: 12 training sessions and 50 inter-village demonstration visits to strengthen skills in sustainable land, water and forest management and maintenance of new techniques</p>			
3. Improving and consolidating knowledge, data and monitoring	TA	3.1 Information improved and data standardized for better monitoring and planning of resources across the basin	<p>3.1.1 An information management system established to feed standardized data and information needs to the regional level (in conjunction with regional project and in cooperation with LCBC and its Observatory)</p> <p>3.1.2 Strengthened monitoring through regular biological, hydrological and socio-economic audits, including trends in deforestation and desertification with GIS, in collaboration with LCBC</p> <p>3.1.3 Good practice guidelines for SLWM and SFM disseminated and used for component 1 and 2 activities; training</p>	GEF T	410,000	2,756,534

		3.2 Enhanced institutional capacity for integrated and coordinated management of natural resources	<p>of trainers program developed/executed with local stakeholders</p> <p>3.2.1 Training program for state agencies) to enhance technical capacity on INRM and landscape planning, with considerations for climate change:</p> <ul style="list-style-type: none"> o Support provided for the collection, processing and monitoring of data/information on basin resources, biodiversity and water quantity/quality o Support provided for implementation in child projects of measures developed under IW and baseline: e.g. GIS, environmental safeguards, hydrological monitoring, etc. o Support to implement and monitor project activities <p>3.2.2 Staff expertise improved through 10 trainings in data collection/standardization techniques, GIS, M&E, etc.</p>			
		3.3 Better knowledge sharing and public awareness fosters improved sub-catchment participatory management and the monitoring of project, program and socio-economic indicators	<p>3.3.1 A communication / information strategy prepared and implemented with tools developed for enhanced awareness of basin-relevant information: promotional media campaign (radio, TV, newspapers), hand bills, posters, etc.</p> <p>3.3.2 Participatory M&E tools developed: monitoring and reporting system functional and disseminating knowledge on project progress and the basin</p>			
Subtotal					3,132,500	19,553,034
Project management Cost (PMC) ³				GEF T	156,282	1,108,466
Total project costs					3,288,782	20,661,500

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 ⁴	20,661,500
Total Co-financing			20,661,500

D. TRUST FUND RESOURCES REQUESTED BY AGENCY, FOCAL AREA AND COUNTRY¹

GEF Agency	Type of Trust Fund	Focal Area	Country Name/	(in \$)		
				Grant	Agency Fee	Total

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

⁴ The AFDB approved loan is denominated in Unit of Account (UA) for total UA13.33million. UA to USD exchange rate is 1,57
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			Global	Amount (a)	(b)²	c=a+b
AfDB	GEF TF	Biodiversity	Niger	502,453	40,197	542,650
AfDB	GEF TF	Land Degradation	Niger	1,461,681	116,935	1,578,616
AfDB	GEF TF	Climate Change	Niger	502,453	40,196	542,649
AfDB	GEF TF	Multi-focal Areas	Niger	822,195	65,776	887,971
Total Grant Resources				3,288,782	263,104	3,551,886

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	560,000	1,210,000	1,770,000
National/Local Consultants	220,000	540,000	760,000

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 PIF⁵

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 main change between the LCB-NREE PFD and the CEO endorsement documents is a change in baseline project from the ‘Lake Chad Basin Sustainable Development Program (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 second phase of the PRODEBALT and builds upon its lessons and interventions. This change and the time passed since preparation of the PFD (four years) necessitate an update in child project alignment to regional and national strategies and plans.

Note: Please refer to the same section in the IW regional child project for additional contextual and supporting information.

The LCB-NREE child projects are fully aligned with the Lake Chad SAP and associated National Action Programs (NAPs), continue their implementation, target the priority regional concerns as expressed in the TDA, and are guided by the 2025 Vision. While the regional IW project centers on strengthening coordination, capacity and enabling conditions at regional scale, the five national child projects seek to invest in technologies and measures to be applied locally for the restoration, conservation and preservation of basin ecosystems, which will form main elements of the PRESIBALT and its GEF components as defined in each Table B. GEF support will focus on specific activities to improve sustainable and integrated natural resources management (INRM), habitat protection, landscape restoration, and livelihood alternatives which reduce pressures on Lake Chad and its sub-basin ecosystems.

The GEF child projects all align to priorities expressed in the SAP, NAPs, TDA, LCBC 2013-2017 Five Year Investment Plan (FYIP), Water Charter, the agricultural and environmental policies of ECOWAS and ECCAS, and international agreements and national plans on wetlands (RAMSAR), climate change (UNFCCC), biodiversity (CBD),

⁵ 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.

and land degradation (UNCCD) which each country has ratified. The Niger child project supports each of the main environmental conventions given its multi-focal nature and integrated activities that cut across four GEF focal areas. Convention-related plans have been consulted for the selection of activities that form part of each child intervention. National projects will retain some flexibility to better align with priorities of the updated SAP and the Lake Chad Development and Climate Resilience Action Plan (LCDAP), although these will nonetheless remain fully aligned with the Vision which remains the overall strategic guiding framework. The LCDAP's focus on resilience and improving living conditions within the basin is an underlying consideration of national projects, and the plan was also consulted closely for choice of interventions.

The Lake Chad NAPs build upon and complement the SAP and address identified environmental concerns in order to meet objectives at the national and regional level. The Niger NAP's main objective is to secure the sustainable and equitable management of water resources as well as supporting sustainable NRM and productive capacity for poverty alleviation. Six main actions are highlighted: 1) Enhanced access to quantity of quality water for all users; 2) Enhanced knowledge and setting up of the operational legal and institutional framework for the sustainable management of water resources; 3) Restoration, conservation and sustainable use of the natural resources; 4) Sustainable conservation of biodiversity; 5) Improvement of fishery production by sustainable practices for the development of fishing grounds and extensive aquaculture; 6) Pastoral development and securing of pastoral systems. The Niger child project is based on the integrated and sustainable management of agro-sylvo-pastoral resources within a landscape rehabilitation approach through measures that reduce pressure on productive systems and natural habitats. It primarily helps meet priorities under NAP actions 1, 3, 4, and 6.

In addition to meeting Niger's Lake Chad national issues, environmental convention related priorities, strategies and action plans were considered, primarily the UNCCD NAP, the CBD NBSAP, and the UNFCCC NC and NAPA. Niger was among the Sahel countries hard hit by drought-related acute food crises in 2005 and 2010 which affected more than 10 million people in the region (2 million in Niger). The country considers food security a priority. Given its arid agro-ecology, difficult for sustaining production and securing access to water, soil and water conservation and better management figure strongly in its environmental priorities. Niger's National Action Plan for Desertification Control (2000) has five priority sub-programs: i. conservation and restoration of degraded lands and mobilization and management of surface water; ii. combating sand dune formation; iii. community forestry and management of natural resources; iv. capacity building of institutions in charge of environmental monitoring, including drought and desertification; and v. follow-up and evaluation. The first and second sub-program seek to reduce threats to sustained agro-sylvo-pastoralism.

Niger adopted its NBSAP in 1998 with objectives to integrate biodiversity protection issues into multiple sectors, and reducing trends in land degradation that threaten biodiversity. The recently updated NBSAP emphasizes the effective management of protected areas, particularly in northern Niger, the need to involve communities in this protection and to enhance income-generating activities that reduce pressure on natural resources and habitats. Through actions to restore and improve Niger's productive capacity, achieve sustainable NRM practices, and protect threatened ecosystems (including Lake Chad, important sub-basins and Sahelian shrub lands), the Niger child project is fully in line with the NAP and NBSAP and represents progress in their implementation.

In 2000, Niger developed a National Strategy and Action Plan for Climate Change and Variability (SNPA/CVC) within the framework of the UNFCCC. The strategy comprises one of six priority programs of the National Environmental Plan for Sustainable Development (PNEDD), launched under the Poverty Reduction Strategy (PRS) of the country, which focused on ensuring energy security and integrated management of national resources, with programs related to food security, poverty, mitigation of GHGs and climate variability. Within the framework of SNPA/CVC implementation, Niger's NAPA was developed, and its priorities were also considered in the selection of project activities. The NAPA highlights a number of key issues, inter alia, improving erosion control, water harvesting and conservation measures for agricultural, forestry and pastoral purposes; disseminating animal and crop species that can adapt to changing climatic conditions; and securing water via improved irrigation. By supporting sustainable and diversified agro-sylvo production, protection and restoration of landscapes, and the sound use of natural assets including better water management, the project will contribute significantly to reducing the vulnerability of rural populations as recognized in the NAPA. Although not funded by GEF adaptation funding, adaptation and resilience remain huge concerns in the Lake Chad basin and in Niger, and cross-cut project objectives. Niger's Second NC indicated as a

priority the reduction of fuelwood use and increased use of renewable energy alternatives. The GEF project aligns to these priorities through activities in sustainable forestry and low carbon technologies, which concurrently meet objectives under Niger's National Forestry Plan (NFP) and its vision 2021, given they reduce pressure on forestlands.

The Government of Niger has placed the rural sector, and water resources management in particular, at the center of combating poverty and stimulating economic growth. The project responds to several national and sectoral strategies, most notably poverty reduction strategies and now the 'Les Nigériens Nourrissent les Nigériens' (Nigeriens Feed Nigeriens), 3N Initiative. Niger prepared a PRSP in January 2002 which set ambitious targets for economic growth and extreme poverty reduction, with the aim to reduce the incidence of rural poverty from 66% to 52% by 2015. The PRS defined several programs to be implemented, among which the priority program on "Preservation of the Environment", which centered on sustainable use of natural resources, rehabilitation of degraded lands, and preservation of forest resources. The PRS was replaced by the Economic and Social Development Plan (PDES) 2012–2015 and the 3N Initiative that outline a strategic vision to 2035, representing Niger's current reference frameworks for the government's development agenda. The 3N initiative aims to promote sustained food security, agricultural development and environmental management. Project activities will contribute to PDES Axis 3 (Food Security and Sustainable Agricultural Development) objectives and is fully in line with the Action Plan of the 3N Initiative.

There are strong complementarities between Niger's Rio convention-related strategies, its NAPA, and national strategies for environmental protection and poverty reduction. Each centers on connected objectives for rural development and food security based on sustainable NRM. The current project addresses interlinkages between environment and development, based on enhanced productivity by protecting natural assets. Furthermore, it contributes to the Niger AfDB Country Strategy Paper (CSP), which was prepared to meet government priorities as set out in the PDES. The Niger CSP covers the 2013-17 period and is based on two pillars: i. strengthening resilience to food insecurity; and ii. strengthening governance, particularly of natural resources. In addition, the project will contribute to the implementation of the AfDB 2013-2022 Ten-Year Strategy with its focus on green and inclusive growth, and more strategic and focused regional programs such as the AfDB's Sahel Initiative (Program to Build Resilience in the Sahel; P2RS).

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 climate change mitigation through renewable and low carbon energy alternatives. 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 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. Activities have been selected taking into consideration the SAP/NAP, 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.

Multi-focal funding is sought from the GEF based on the transboundary nature of the Lake Chad basin and the need for a concerted effort to address the challenges faced in conserving the ecosystems of the basin while also ensuring food security for the basin populations. The LCB-NREE's strategic approach is to implement a program consisting of projects that cover multiple GEF focal areas (IW, LD, BD, CCM, SFM). Each of these priority areas requires focused integrated activities implemented at sub-national, national and regional scales. The programmatic approach thus ensures greater coordination and that the outcomes from the child projects will be cohesive, leading to greater impact through the linking of local level to regional level. The program is mainly focused in the IW GEF focal area but its national child projects cover the other focal areas. The regional level will allow harmonization of data collection from national to regional level, coordination of activities and ensure a comprehensive and synchronized IWRM approach. There are clear synergies between the priorities of the UNFCCC, CBD, and UNCCD which emphasize critical integration between their relevant focal area issues. The child projects will connect to the regional IW project through this underlying interlinkage. The Lake Chad basin countries (with the exception of Cameroon, based only on LD) will contribute GEF resources from LD, BD, and CCM, in addition to the SFM incentive mechanism for their child projects, creating strong bases for integration, regional scale-up and transformation.

The Niger national project will use GEF funds to ensure that activities and investments take place on the ground and with communities for positive impact on productivity and on the integrity of agro-sylvo-pastoral systems. The project has been developed as a multi-focal area operation combining several of the GEF strategic goals. It directly addresses agro-ecosystem productivity and land degradation in targeted dryland settings by promoting community-based, locally suitable SLWM practices (LD1, added since PFD stage), and measures which help reduce pressure on agro- and forest ecosystems and their biodiversity (LD, BD). It promotes an integrated approach to NRM through field interventions and capacity building that ensure soil rehabilitation, carbon sequestration and improved productivity of agro- and forest landscapes (LD2, SFM1), following an approach that addresses livelihood needs alongside environmental protection. It will use BD and SFM funds to promote the integration of sustainability and conservation into production landscapes and in land and forest management, while at the same time enhancing livelihoods of those dependent on natural resources. The project further aims to reduce pressure on forest resources through SLM and SFM zones which will generate and maintain flows of forest ecosystem services (SFM/REDD+1). Related activities in reforestation, good forest management and planning, and introduction of renewable and low carbon alternatives to traditional household or agro approaches (CCM3) will supplement and help to improve forest functioning and stability. The consequent reduction of deforestation, increase in vegetative cover and carbon stocks (directly or indirectly) will significantly reduce GHG emissions (SFM1, CCM3). As such, the project aims to secure important supporting and regulating services that are critical for ecological processes and socio-economic needs in difficult agro-ecological contexts.

Activities cross-cut GEF strategies so that a range of local and global benefits can be drawn from the rehabilitation of degraded landscapes (croplands, rangelands, woodlands, and wetlands). Barriers to sustainable NRM and agro-sylvo-pastoral production will be overcome by enhancing awareness and capacity, by improving knowledge of critical natural systems, by testing participatory solutions to resource management, and by preserving biodiversity that sustains the ecological integrity and services of the Lake Chad basin. The project is designed to stimulate the regeneration and preservation of the broader landscape (and concurrently the Lake), in ways that also enhance land productivity, climate resilience and mitigation.

The Niger project is a clear example of a multi-focal intervention. It creates synergies between GEF focal areas for greater positive impact on fragile ecosystems. The geographical location of the project is strategic for reinforcing the protection of the Lake Chad basin and its Nigerien sub-basins (contributing to IW goals). The activities will foster holistic approaches to rural development and environmental management that simultaneously address micro and macro concerns, from livelihood to biodiversity protection. By supporting investments in land, water and forest conservation, agro-sylvo-pastoralism and low-impact energy, GEF contributions will enable the project to tackle root causes of environmental challenges in Niger and apply cross-sectoral responses. The goal is a stronger trend towards sustainable management, regeneration and ecological stability of Sahelian ecosystems.

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 for Niger.

The regional operations of which Niger is part 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 Sahel, primarily the Program to Build Resilience to Food and Nutrition Insecurity in the Sahel (P2RS). National projects are in line with Niger's CSP and focus mainly on rural development, food security and governance of natural resources.

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 outputs of past operations, specifically by continuing activities in governance, silt control and agricultural land rehabilitation, and applying lessons learned during the implementation of previous programs. By addressing the sustained management of basin water resources as well as regional integration, PRESIBALT addresses community vulnerability, agriculture, food security, and climate change issues. 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.

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 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 flooding options stemming from pilot tests conducted in the Waza-Logone plain; (ii) technical silt/erosion control choices 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 implementation for improvement. 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 designs 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, given 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 priorities and planned investments in 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 technical 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) since the preparation of the PFD have altered some realities on the ground, changing the overall baseline context, and thus requiring a new review of the context and 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 required detailing of project activities underlines the child projects. To note further, in the PFD, additional AfDB national baseline projects (ongoing or pipeline) for each country were identified at the time as co-financing. However, to avoid risks or unsuitable baseline projects, only PRESIBALT will now count as co-financing.

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, water conservation, erosion control, removal of invasive plant species, channel rehabilitation, agro-forestry, local biodiversity conservation (e.g. kouri cattle), fish preservation, and income generation activities. 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. As an example, during PRODEBALT, some communities rejected new technologies and practices, such as the planting of trees on their farmlands. Not enough sensitization and involvement of communities was pursued which will be remedied this time around. 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 improved 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.

Note: Please refer to the IW regional child project for background information on Lake Chad.

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 anthropogenic factors have worsened, and will continue to worsen. Lake Chad is a source of livelihood for millions of people inhabiting the catchment. The value of the lake and basin is in the ecosystem services they provide, 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 suffer from extreme vulnerabilities and insecurities.

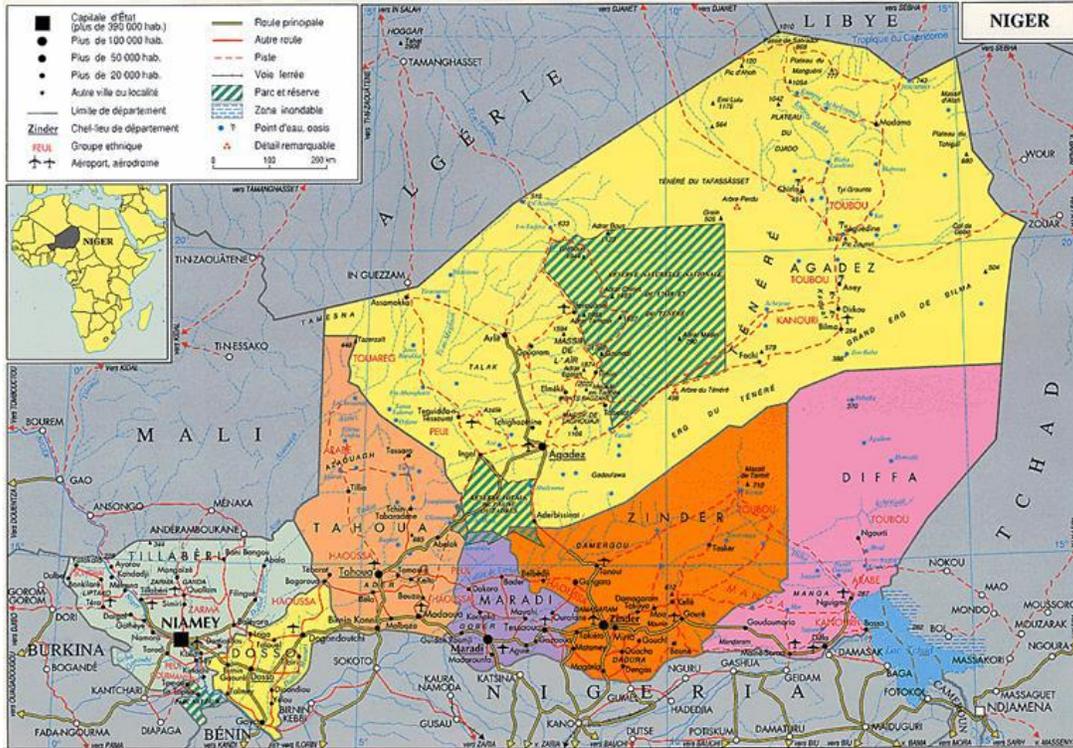
Niger lies in the middle of Africa's Sahelo-Saharan belt. A difficult agro-climatic context poses serious constraints on the production of food and the preservation of the natural resource base. It also makes Niger one of the poorest countries in the world. The rural sector plays a key role, even though only 12% of the national territory can be cultivated given low rainfall patterns. Harsh climatic conditions are such that annual rainfall is below 300 mm on nearly 75% of the national territory. The rural sector employs over 80% of the working population, but it is also in rural areas where the highest number of poor people are found (86%). Agricultural productivity is under pressure from a rapidly growing population over the past decade. At a rate of over 3%, population growth has led to an expansion of intensive agriculture onto marginal lands which has contributed to an observed negative trend in soil erosion and loss of land productivity. Perennial water resources are limited to the Niger River in the West, and, to a much lesser extent, to the Komadogou-Yobe in the extreme South-East. Rainwater runoff is estimated at about 30 billion m³, but only a fraction of this is effectively collected. Niger's surface and ground waters are not suitably harnessed, leading to extreme scarcity and loss. The ever increasing demands on and for water by the growing population could lead to medium and long term water related conflicts, affecting both the Lake Chad and Niger river catchments.⁶

Niger is experiencing a high degradation of its productive potential resulting from the combined impact of increased land pressure, irregular and unfavorable rainfall, and traditional - often unsound - agricultural methods. Poverty is pushing rural communities to overexploit the few available resources of the landscape (soil, pasture and dryland forests) beyond their sustainable and renewal capacities. Such has resulted in a generalized state of overgrazing, reduced availability of woody resources, the virtual disappearance of fallow periods and increased soil infertility. The primary sector remains heavily subject to climate change and external shocks. Its performance remains inadequate and is resulting in increased food insecurity, with the country's food deficit becoming chronic. On top of this, a low level of literacy, environmental education and technical skills limits the productivity of rural actors, their ability to understand environmental degradation, and appropriate control and response methods. Nonetheless, there is potential in Niger, including surface water resources and run-offs that can be better managed and opportunities for diversification and resistance of agricultural crops.

In Niger, the conventional basin of Lake Chad covers the regions of Diffa (the largest region of the basin) and Zinder. The Diffa region is the project target region and is located in the extreme south-east of Niger (see map below). It is one of the areas in Africa that has suffered most from drought in recent years. Diffa's economy is primarily rain-fed agriculture, based on farming and pastoralism. This heavy dependence leaves the country vulnerable to food crises. The major crop, grown both for subsistence and trade, is millet. Other areas grow maize, sorghum and cowpea. Surface water sources are mainly concentrated in the south, in the oases of the Maïné-Soroa department, in the areas near Lake Chad, and in the Komadogou-Yobe river valley, a river which marks the border with Nigeria over 150 km and flows directly into Lake Chad. The Diffa region is one of the most unproductive and vulnerable agricultural areas in Niger. Cropping practices are rudimentary, extensive, based on food crops, and often dictated by subsistence needs. Prior to the chronic droughts of recent decades, the region's food self-sufficiency was assured through rain-fed and flood recession cultivation, which depended on rainfall patterns and the behavior of Lake Chad. With the deterioration of climatic conditions and retreat of the lake, the cereal deficit has increased. The harnessing of water and upkeep of natural capital require effective soil and water conservation measures capable of ensuring environmental protection and the survival of rural communities.

⁶ AfDB: <http://www.afdb.org/fileadmin/uploads/afdb/Documents/Project-and-Operations/Niger%20-%20Diffa-Local%20Development%20Support%20Project%20%28PADL-D%29%20-%20Project%20Completion%20Report%20%28PCR%29.pdf>
GEF5 CEO Endorsement Template-February 2013.doc

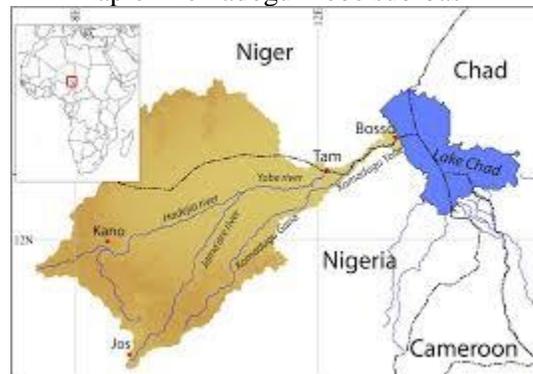
Map of Niger and location of Diffa in the southeast



Source: AfDB Niger Country Strategy Paper (CSP)

Niger has access to the northern part of Lake Chad but at the moment this is mostly a large marshy wetland, given that water from the Komadugu-Yobe and Chari-Logone rivers are currently insufficient to fill the northern basin. The Komadugu-Yobe sub-basin covers 148,000 km² in northern Nigeria and southern Niger, with only 5% of the sub-basin's water in Niger. Water flows into the river have fallen drastically due to reduced rainfall, water abstractions and high evapotranspiration rates. Given regional climate change and poor water management, the fluvial and groundwater system of this sub-basin have negatively altered hydrological regimes, with impact on Niger's aquifers and important wetlands. This is influencing the loss of the productive capacity of landscapes but also biodiversity and habitats, including important refuge for aviary fauna coming from Lake Chad and other flora and fauna of significance in the region (shrub steppe ecosystems and local animals). Since the Diffa region is entirely in the Lake Chad conventional basin and that Niger shares important sub-basins with Nigeria and Chad, there is a need to link project activities that are complementary and synergistic for greater impact.

Map of Komadugu-Yobe sub-basin



Rapid population growth translates into a perilous equilibrium between food and energy needs and the relation to wooded areas. Modern energy services are almost completely absent in rural Niger. This lack means that households

and other rural actors depend on traditional sources such as fuelwood. Small energy services are obtained at the expense of the environment (forests). Land Use, Land Use Change and Forestry account for about 56% of total GHG emissions in Niger, whereas the agricultural/livestock sector accounts for 34%.⁷ These activities are linked to the growing demand for fuelwood and charcoal, shifting cultivation, slash-and-burn agriculture and overgrazing, which are resulting in deforestation, desertification, and a loss of carbon sequestration capacity in biomass and soils.

According to Niger’s NAPA, climate change has contributed to a food and water resources crisis which will be further aggravated. The most anticipated climate scenario in Niger is a hotter and more variable climate, resulting in unpredictability of the rainy season (onset and duration). The most severe impact will be an increase in the frequency, intensity and duration of droughts, which will result in a decrease in agricultural and fishery production, a concomitant increase in grazing pressure on pastoral ecosystems, increased soil erosion on a large scale, and considerably higher rates of evapotranspiration which will reduce water for vegetation, human and animal consumption. Surface and ground water recharge will consequently be reduced.

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, with UA 13.57 million allocated for Niger specifically. 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 fishery 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 security levels. 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.

⁷ AfDB Niger CSP

<p>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.</p>	<p>Program objective: To build the resilience of socio-ecological systems for sustainable and inclusive development in the Lake Chad Basin</p>
<p>Component 1: Protection of Lake Chad and its Basin (i) Soil conservation; (ii) Fight against invasive species; (iii) Conservation of biodiversity</p> <ul style="list-style-type: none"> - 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 	<p>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</p> <ul style="list-style-type: none"> - 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-logger” manometers with tele-transmission capabilities - Construction of mini drinking water supply systems and boreholes equipped with solar-powered pumps
<p>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</p> <ul style="list-style-type: none"> - 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) 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 	<p>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</p> <ul style="list-style-type: none"> - 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 plants - Equipment for developing, processing and marketing - Improved access by women to irrigated land schemes - Creation of multipurpose centers for women
<p>Component 3: Institutional Support</p> <ul style="list-style-type: none"> - 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 	<p>Component 3: Institution building and program management (i): Institution building (ii) Coordination and management</p> <ul style="list-style-type: none"> - Trained beneficiaries (including women) - Reinforced women’s leadership - Reinforced local governance - Rural and community leadership - Coordination - Planning and monitoring of activities

Component 4: Program management - 1 regional coordination unit within the LCBC and 5 national coordination units	- Recruitment of service providers - Financial management and audit
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Moreover, other donor partners are currently developing their own regional interventions in Lake Chad also related to SAP implementation, primarily the UNDP with GEF funding. The 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. 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 need to be strengthened 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 communities to realize the extent of their role in environmental management. Enhanced awareness and appreciation of inter-linkages within landscapes are also part of the program. National projects will carry on the momentum of PRODEBALT and PRESIBALT, sustaining activities at local level where action is most needed.

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 proposed GEF funding is identified as part of the PRESIBALT and implemented as a single project by the African Development Bank. The components described in table B will complement the activities identified under PRESIBALT, for the Niger child project.

It should be noted that there is no separate GEF project implemented as a standalone. All activities will be complementary to PRESIBALT. The total GEF grant will not finance purely infrastructure but is focused on improving existing facilities and enhancing land management, agricultural practices and community level forestry management.

Here are some assumptions underlying the GEF incremental reasoning for this child project:

Without GEF: Without the GEF funds the current practices in agriculture, pastoralism and fisheries are unsustainable and will continue to have a big impact on the Lake Chad’s Niger-based ecosystem protection and regeneration. These practices, from land-use planning to production, pastoralism and local energy consumption (wood), are failing to maintain ecosystem functions and cannot facilitate sustainable development. Whereas the PRESIBALT baseline project supports building “the resilience of socio-ecological systems for sustainable and inclusive development in the Lake Chad Basin” through investments in water resources management (rehabilitation of Waza-Logone, Hadjeria-Nguru and Kamadugu-Yobe plains), sustainable fisheries and livelihoods, and social infrastructure, it does not propose a comprehensive landscape-based approach to INRM in the five countries, including Niger.

With GEF: In the alternative scenario, additional activities aiming to promote integrated ecosystem management for Lake Chad conservation will be implemented. GEF activities will focus on Lake Chad ecosystem protection, services and food security through enhanced agro-sylvo practices and sustainable natural resources management in Niger’s Diffa

region. The GEF funding will build on the baseline scenario by financing the incremental costs associated with: (i) Enhancing agro-sylvo systems by developing and implementing SLM/SFM practices that incorporate conservation measures; (ii) Promoting energy and livelihood alternatives to safeguard ecosystems and food security for an integrated ecosystem-based development, (iii) strengthening the existing local institutions to play a more effective role in sustainable management of Lake Chad; (iii) and increasing public awareness of the importance of biodiversity on livelihoods in the Lake Chad Basin.

The GEF funds will allow the project to address the underlying drivers of resource degradation, the functional integrity of ecosystems, and span the full array of natural assets needed in a Sahelian context.

The GEF incremental financing activities are detailed below:

- Activities contribute to SAP and NAP implementation and the strengthening of national and local capacities for INRM and ecosystem-based approaches.
- GEF will finance investments meant to promote better management of land and water resources within communities, with the goal of improving the sustainability of baseline investments. Innovative and sustainable land, water and forest management practices will be applied locally, with strong potential for replicability and scale-up to generate local benefits and GEBs, including reduced vulnerability to climatic or other shocks.
- The promotion of SLWM and SFM in target dryland ecosystems to sustain productivity and strengthen the flow of agro- and forest ecosystem goods and services within the Lake Chad basin, with concrete benefits for sustainable production, conservation and resilient livelihoods. Field interventions in sustainable agricultural and forestry practices to reduce land degradation, enhance water quantity/quality, and restore/protect important habitats (wetlands, dryland forests, etc.). Interventions will build for example on baseline floodplain and channel rehabilitation work. GEF activities will also help in regenerating and protecting land to reduce erosion/siltation and stabilize tributaries.
- Biodiversity mainstreamed into landscape planning and knowledge generation on biodiversity in the sub-basin. Biodiversity value identified for better incentives in protection with integration of ecosystems valuation in land-use planning. Biodiversity considerations also incorporated into activities on SLWM, habitat protection, and crop production. Arise incremental to baseline creation of a biosphere reserve for Lake Chad and associated surveys.
- A RE and low carbon energy dimension is added to the baseline to further enhance landscape protection aspects and concurrently bring benefits within the households.
- Environmental awareness will be added to baseline capacity building programs, including to address climate change and training linked to field investments.
- Actively involve communities in the management of resources and in the equitable sharing of benefits, with concrete improvements in food security, poverty reduction, and adaptive capacity. The needs of women, youth and vulnerable social groups are better taken into account.
- Enhanced capacities and enabling conditions for environmental protection and sustainable development. Stakeholders and institutions at national, state, and local levels better equipped to manage SLWM, work across sectors and the landscape, and partner with communities to implement environmental programs.

The GEF contribution in this program is fully incremental as it will fund exclusively activities listed above for the national project. GEF resources provide an excellent portal for significantly influencing the LCBC SAP investment program (including PRESIBALT) in a critical ecosystem, particularly one where the most important priorities are addressing Basin watershed degradation and declining biodiversity conservation. Strengthening of regional cooperation, through the IW child project, will likely trigger additional investments by other partners, including AfDB, GIZ, WB, etc. in the future. GEF and other multilateral partners will ensure that the LCBC is able to prepare and implement sustainability strategies beyond the initial GEF funding. The project will lay the foundations for knowledge, capacity and cooperative institutional frameworks for a long-term program of investments in the Lake Chad Basin, which will rehabilitate and stabilize the ecosystem. In particular, these will be investments in the reduction of soil erosion and land depletion, the sustainable management of fisheries, and the promotion of energy and livelihood alternatives that safeguard ecosystems and food security. There will be substantial investments guided by the LCBC SAP.

Success in the current project will lay the foundations for longer term national benefits for the five countries concerned. Cumulatively, the enhanced environment will strengthen the Lake Chad ecosystems, including globally significant biodiversity, as well as maintain the capacity of natural systems to sequester carbon. The IW child project involves significant regional capacity building costs, first to establish cooperative agreements (Water Charter), and second to implement priority elements (SAP). These costs are clearly incremental in that they are not in the national baselines or AfDB investment (PRESIBALT), would not be incurred without the project, and would not address transboundary environmental issues.

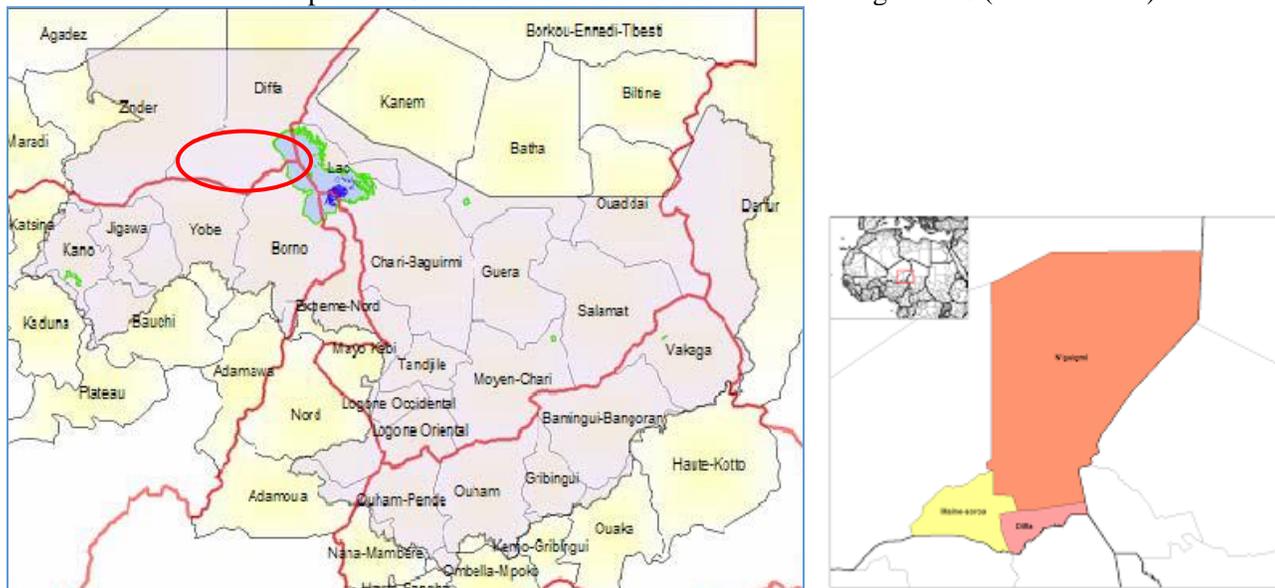
The initial project concept designed as a PFD and a change in baseline require an in-depth description of the detailed components, activities and incremental reasoning for each child project to be financed by GEF. The project, despite a baseline change, still follows the original guidelines of the PFD but the specificity of activities is better defined in each CEO endorsement document.

The Lake Chad context underlines the clear interlinkages between socio-politico-economic and ecological vulnerability, and the need to develop an incremental program for global benefits based also on local livelihood needs. Hence, catalyzing collective protection of the Lake Chad basin through stress reduction measures will be promoted while providing benefits locally for food security, rural development, basin health, and regional stability. The future of the Lake generally depends on water inflow, demographic pressure, and socio-economic development. As such, GEF incremental activities in child projects consider these aspects and will target related measures, making baseline investments more sustainable, transformative and with potential for environmental scale up.

Transboundary and national priorities as identified in the SAP and NAPs will form the backbone of GEF support with PRESIBALT. The AfDB's intervention through PRESIBALT and the GEF funded child projects aim to restore the capacity of productive landscapes and the functioning of ecosystems for the overall benefit of food security, resilience and conservation. The GEF activities within the regional and child projects will together aim to enhance coordination aspects within the basin, including of national projects; enhance participation and capacity of stakeholders; strengthen institutional and enabling frameworks for INRM; prevent imbalances in water quantity and improve quality; and help sustain ecological capital for local and global benefit.

The project target area is Diffa which covers an area of 140,000 km², representing 11% of the country's total area, with currently over 450,000 inhabitants. The region comprises three departments (Diffa, Maïné-Soroa, and Guigmi) and consists of three agro-ecological zones: i. an agricultural zone in the South, characterized by the presence of surface water; ii. an agro-pastoral zone dominated mainly by livestock breeding with increasingly marginalized agriculture, and iii. a northern desert zone with no potential for cropping. Population is unevenly distributed with wide disparities from North to South. The greatest concentrations are in the Komadogu and Maïné-Soroa oasis valleys, in view of the greater water resources and agro-pastoral potential. The North, which is virtually desert and once exclusively pastoral, is now practically depleted of people. The climate is very arid, characterized by a dry season from October to June and a short rainy season from July to September. Agriculture and pastoralism are the main economic activities, with stockbreeding constituting either a primary or additional activity according to need and agro- zone. Yields vary from year to year as a result of climatic conditions and pest outbreaks; however, for over a decade, cereal production does not meet demand.

Map: Lake Chad basin and location of Diffa and target areas (circled in red)



Source: AfDB PRESIBALT

The principal environmental challenges in the Diffa region are: high pressure on agro-ecosystems from a growing population, water scarcity, high vulnerability of production systems to climate hazards, degradation of agricultural and pastoral lands, and loss of the vegetative cover, especially forest and shrub land. Together, these are affecting the region's productive ecosystems, biodiversity, and the services they render. Agro- and forest ecosystems are being degraded by unsustainable resource use practices and progressive depletion of natural habitats (woodlands, wetlands, etc.). Better response capacity and optimizing landscape productivity are a response to such constraints, related to the rehabilitation of croplands and rangelands, conservation of water; and improved exploitation of woody biomass. Diffa requires urgent environmental protection measures, at the basis for safeguarding agricultural production, food security and self-sufficiency. Without, Diffa populations and natural capital are at further risk.

The Niger project rests on the scale up a sustainable, integrated management of natural resources within a landscape restoration program. The aim is to sustainably intensify agro-sylvo-pastoral systems, develop the productive basis of the region, and secure the ecosystem services provided by agro and forest landscapes and biodiversity, with a clear regard for food and water security, and taking into account major agro-ecological constraints and development needs. To this end, the focus is on the following major issues: (i) a shift towards sustainable use of resources capable of regenerating and preserving the landscape; (ii) improved water use efficiency and availability; (iii) integration of sustainability and conservation concerns into the productive and natural landscape, for protection of forestlands, wetlands and overall biodiversity; (iv) increasing vegetative cover and thus carbon stock; and (v) improving resilience of communities and ecosystems to the impacts of recurrent drought. The three main components of the project are:

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

Component 1: Improving agro-pastoral management and productivity in drylands

Diffa faces difficult natural conditions for production and subsistence: insufficient rainfall and limited arable land, coupled with damaging agricultural and pastoral practices, are deteriorating the resource base that sustains livelihoods and local economies. Production is highly unstable, sand dune encroachment is advancing, siltation worsening, and dryland ecosystems are being depleted, including wetlands and cropping areas. Growing population numbers are also increasingly encouraging conversion of savannah shrub land zones to croplands. Extensive issues aggravating land degradation include the cultivation of marginal lands, shortened fallow periods, and repetitive bush fires that destroy the regenerative capacity of soils.

Rangeland degradation is resulting from overgrazing and expansion of cropping areas. The time spent by herds in the north is increasingly shorter due to a combination of factors that have reduced fodder and water availability (drier climate, sand dune invasion, bush fires, etc.). As a result, herds are returning sooner to the southern crop production zone. As animal concentrations rise, overgrazing and reduced transhumance are increasing soil vulnerability and reducing green cover. Increasing land degradation from the movement of herds and the expansion of cropland is increasing competition for resources and local conflict between herdsmen and farmers.

Furthermore, a prolonged dry period from the late-1970s to the mid-1990s led to a general drop in the groundwater table of these areas. Current water withdrawal rates for human, agricultural and pastoral consumption and loss due to poor management continue to threaten the water table. It is thus imperative to use the limited available water resources in a way that diminishes loss and invest in collection, harvesting and conservation (thus not hindering natural replenishment processes of aquifers).

Component 1 focuses on the protection and development of the region's productive bases by improving agro-pastoral practices. The Diffa region has become structurally deficient in agricultural production despite having considerable potential in soils (relative to other areas of the country) and water resources (Lake Chad and Komadogu-Yobe river). Component 1 activities will scale up a rational and sustainable use of natural resources which regenerates and protects the landscape. The focus is on sustainable agriculture and implementing integrated approaches to soil fertility and water management in areas where agricultural and rangeland management underpin the livelihoods of poor rural farmers and pastoralists.

To enhance agro-pastoral development, component 1 will invest in sustainable farming and better the conditions for livestock grazing. Improved management of agro-pastoral systems will see enhanced adoption of good practices and technologies for crop and livestock production, most adaptable to arid contexts. Activities entail investments in SLWM for the rehabilitation of degraded/degrading croplands and rangelands, conservation agriculture, agro-pastoral infrastructure and inputs (irrigated perimeters, water points, cereal banks, resistant seeds), integrated approaches to soil fertility (agro-forestry, assisted natural revegetation); i.e. measures that can rehabilitate the landscape and maintain the functionality and cover of agro-ecosystems.

Recovery of degraded croplands and pastures will involve the seeding of forage grass, planting of trees and other fodder species to increase soil fertility, the production of biomass as well as combat desertification. In order to facilitate access to the Komadogu for stock watering, the project will also support the creation of livestock corridors in addition to revegetating grazing areas and reducing land area subject to uncontrolled bushfires. Rainwater harvesting and water use efficiency (in irrigated perimeters, etc.) will help reduce water loss and waste, securing greater availability throughout the year and during dry spells, and will be fed by renewable sources (solar pumps). In addition to soil and water conservation techniques, climate resilient seeds will be disseminated to enhance diversification and adaptive capacity. The project will ensure that measures are tailored to address the vulnerabilities of the rural population. Together, activities will increase production, maintain or improve the flow of ecosystem services, and reduce community vulnerability to climatic and other shocks, thus sustaining long-term livelihoods and increasing the adaptive capacity of both ecosystems and populations.

These activities require close consultation with local authorities, councils and communities. Participatory planning and capacity building will thus cross-cut activities as necessary, and remains relevant for the other project components too. Investments in SLWM will go together with technical assistance. The effective participation of communities in the target areas will constitute a constant concern and a fundamental condition for the interventions. A participatory approach will be pursued in the definition and prioritization of activities, target sites, and will be supported by a capacity building program at relevant levels of intervention: communities and households, community groupings, regional services, management committees, etc. The capacity building will aim at improving the technical and organizational abilities of rural actors, and enable various stakeholders to assume the functions and responsibilities assigned to them, for empowerment and sustainability purposes, based on co-management and enhanced knowledge at local level on the need and ways to sustainably conserve the agro-sylvo-pastoral capital. The support program will comprise training for: rural households, committees for new locally managed structures, producer associations, extension workers, decentralized service staff, etc. Even at the commune level, training and sensitization will target

local elected officials and members of communal councils, with a view to sustaining project activities and sustainable practices beyond project timelines.

Outputs:

- Improved and sustainable farming with application of conservation agriculture on 400 ha
- Development and revegetation of grazing areas over 200 ha, with transhumance corridors demarcated
- Seeds of drought-resilient food crop or fodder varieties disseminated in 10 rural communities, with cereal/feed banks established and managed by committees
- Community awareness raising program on improved agro-sylvo-pastoralism and ecosystem protection: 5 training sessions per year targeting farmers, pastoralists and fishermen in target communes
- Rehabilitated landscapes, including productive areas of the Komadogu-Yobe basin: 500 ha restored by SLWM measures (crop rotation and diversification, soil restoration and dune stabilization techniques); 300 ha covered by firebreaks and windbreaks
- Increased vegetative cover regenerates degraded soils, rangelands, and forestlands: 300 ha under agro-forestry in crop or grazing systems; 300 ha under natural farmer managed regeneration of woodlands for fuelwood and fodder
- Small-scale irrigated perimeters at village level: 100 drip irrigation units powered by solar pumps functional
- Increased access of people and livestock to water: 30 pastoral wells and boreholes operational; rainwater harvesting introduced in 10 communities

Component 2: Natural habitat protection to ensure ecosystem services from the landscape

The highly fragile production bases and natural habitats of the Diffa region, which deliver key ecosystem services delivered by the broader landscape for ecological and human need, are seriously threatened by unsound and non-renewable resource utilization methods. Concurrent to the sustainable and integrated management of natural resources pursued under component 1, the project will carry out environmental protection measures targeting key agro- and forest ecosystems, so that critical services they deliver can be maintained and biodiversity preserved. Component 2 will center on the protection of natural habitats and safeguard of ecosystems which underlie the survival and wellbeing of communities and ecology.

A growing Diffa population is leading to increasing conversions of savannah forest and shrub land zones into croplands, degrading important wetlands and floodplains, and destroying habitats of importance to local flora and fauna. The effectiveness of environmental protection measures will depend on the level of mobilization of the people, their supervision and particularly the level of technology and knowledge transfer. Activities include increasing ground cover through reforestation, technologies that indirectly reduce pressures on woodlands (by popularizing the use of improved cook stoves), and collaborative management and planning practices. Improved practices in forest management, concurrently increasing access to low carbon energy options, will protect the ecological integrity of agro- and forest ecosystems and natural processes. The environmental protection measures will also work to stabilize dunes and river banks against erosion, safeguard oasis basins and bottomlands, and protect water bodies from siltation.

Improved management of forests at the local level will flow from the promotion of good management practices in community and small-holder forestry. Moreover, reduced deforestation will result from the adoption of agricultural and domestic technologies that reduce pressures on woodlands (low carbon fuel substitution).

The activities will require the selection of appropriate species and establishment of nurseries as well as training of communities in SFM, improving understanding at all levels on the need to conserve biodiversity and ecosystem functioning. The project will thus mobilize rural stakeholders to take part in activities for the recovery of degraded landscapes, planting of vegetation in the Komadogu-Yobe basin, and in the protection of biodiversity and forested areas. Integrated landscape management will be pursued through a local-level approach that considers the interconnectivity between resources and ecosystems. Biological protection methods (plant and tree cover) will be implemented by closely associating the communities while community forestry activities, in addition to combating sand encroachment, will also ultimately provide fuelwood and fodder for community needs.

Strengthened capacities of stakeholders to assume responsibility for the restoration of the agro-sylvo-pastoral potential and management of activities will parallel ground level action. SLWM practices with biodiversity considerations will

ensure the sustainability of agricultural practices and alternative livelihood options promoted in the baseline projects. In addition, land use plans that incorporate biodiversity, land use, and ecosystem services valuation will be developed and adopted to enhance the planning and management of the landscape as well as consistency and coordination in natural resources management. Improved land use planning at local levels (e.g. grazing reserves, conservation areas, etc.) will help manage trade-offs between multiple land and water uses, and economic or ecological functions. Results of component 2 activities will ultimately result in a gain in dryland forest area managed in a sustainable way and the maintenance of numerous forest ecosystem services, such as habitat services (biodiversity), regulating services (carbon) and productive services (soil and livelihoods).

Outputs:

- Reforestation to biologically protect natural terrestrial and aquatic habitats from erosion, silting and general degradation: 300 ha in the Komadogu-Yobe sub-basin planted with vegetation and trees, with select conservation set asides established
- Preservation of woodlands through indirect actions based on low carbon technologies for domestic energy needs: 60,000 improved cook stoves distributed
- Renewable and low carbon technologies for productive and domestic purposes adopted, with 3,000 households using energy alternatives to traditional approaches
- SFM practices introduced in target sites to maintain natural forest cover: two community forest plantations established for timber and non-timber products
- 300 ha of natural forest (savanna) are sustainably managed through the development of 4 management plans
- Community forestry guidelines defining pressure points produced
- Sustainability and conservation integrated into landscape management: land-use plans incorporating grazing areas, community forests and ecosystem services valuation developed and adopted in 10 communities
- 50 community NRM committees established for conservation areas, water points and community forests
- Capacity building for NRM committees: 12 training sessions and 50 inter-village demonstration visits to strengthen skills in sustainable land, water and forest management and maintenance of new techniques

Component 3: Improving and consolidating knowledge, data and monitoring

Inadequate information and data are a major constraint to developing an accurate understanding of the current and future environmental problems in the Lake Chad Basin. Managing basin resources requires information and identifying the mechanisms at play in order to interpret data and observations for better response 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 countries, local governments, producer organizations, etc. The regional IW project aims to facilitate the collection and standardization of hydrological, environmental, and socio-economic information to improve evidence-based decision making at local, national and regional levels, and aims to link this effort with national child projects and to national water bodies. To reinforce the IW outcomes and the GEBs for Lake Chad, component 3 of each child project will help maintain strong links to the regional project. It will help improve information sharing and the transfer of lessons among national and regional stakeholders, data collection and standardization, and the application of analytical and monitoring tools. Standardization allows to assess synergies among environmental, agricultural and livelihood outcomes which will become more clear to state actors and strengthen the case for INRM/IWRM. Component 3 complements components 1 and 2 and creates the link to the regional IW umbrella project. All child project components 3 will thus be linked through needed knowledge, trainings and collaboration.

In the basin countries, better capacity on data production, harmonization and transfer to the LCBC is needed so that data collection and exchange can be enhanced. A system of audits and hydrological data gathering by states will be set up by the baseline and regional project to feed the regional database within the LCBC Observatory, and child projects will help make this system functional. The priority is to build the decision-support knowledge base so that resource management decisions at regional and national scales can be taken on the basis of advanced information on water, socio-economic and ecological conditions. Component 3 will thus look to improve and apply the information base, institutional cooperation within and across countries, and generation and exchange of knowledge that can be effectively used for policy and planning.

Given the need for enhanced synergy and basin wide monitoring, component 3 will also support the application of regional tools developed under the IW in the child projects, such as those related to environmental safeguards and hydrological monitoring. A training program related to these needs will be developed and implemented, enhancing state technical capacity on GIS, M&E, INRM, data collection/processing, etc. Best practice guidelines in SLWM and SFM will be developed and disseminated to land users via technical packages and training programs linked to components 1 and 2. Capacity at the local level (community groups, water users, national agencies) will need to be strengthened to ensure that all stakeholders, communities included, contribute to a theory of change approach and to improve chances of success, impact, and sustainability. At the national level, lessons learned on good practices can be advanced through consultations, workshops, outreach materials, and other public exchanges, and thereafter replicated.

Effective implementation of child projects requires better institutional performance and information modernization. Component 3 of each child project will therefore not only make links to the knowledge component of the IW project but be project-specific as regards project management capacity, knowledge, and M&E. Support for project management, project M&E, and strategic communications will form part of the assistance. The component will produce a knowledge management and communication strategy and tools for enhancing public awareness at local and other scales as well as the creation of guidelines to facilitate project implementation. The SLWM and SFM activities will also be associated to the knowledge generation needs and information sharing. Better communication can lead to better involvement and improved capacity of communities, civil society and the state in decision making processes. Communication, consultation, and community participation during planning and implementation will be sought throughout project implementation for better success potential in environmental management.

M&E at program and project level will complete component 3 activities. A project-specific M&E system will be developed and then linked with and improve state M&E systems and regional M&E systems to be developed under the IW and baseline projects. Such will provide a basis for enhancing capacity to monitor interventions and the state of environmental resources. Technical assistance to develop and implement the M&E system will be provided. The M&E framework will additionally monitor indicators on land cover (including desertification) and socio-economic status (with clear considerations for gender). The assessment of progress via indicators will be part of the information to be gathered at regular intervals and towards learning objectives. Periodic project monitoring will allow improved adaptive management, partner synergy and ecological effectiveness.

GEF alternative

The activities proposed for GEF financing will build on the institutional approach in the PRESIBALT but will enhance field level activities. While PRESIBALT focuses more on lake protection and improvement/monitoring 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. irrigation schemes, rural community infrastructure, sanitation, processing and marketing techniques, value chain development, IGAs, rural electrification, piloting PES schemes, etc.), the GEF child projects will complement the PRESIBALT to enhance aspects of transboundary coordination (IW), and amplify considerations for long-term environmental preservation of the Lake Chad basin (linked to LD, BD, CCM, SFM). The baseline project, although substantial and centered on rural environmentally-friendly development, does not pay enough attention to ecosystems within a broader landscape and basin-wide approach. The full AfDB-GEF program, with the IW regional project acting as the umbrella, is designed to promote sustainable solutions to identified problems and adaptive management within an environment of change and insecurity. Rather than only planning to sustainably develop Lake Chad, the priority with GEF funds is to eventually restore or rehabilitate the basin in the long-run with incremental actions at national level. The Niger project activities will be incremental in adding specific considerations for and interventions in sustainable NRM on the ground.

Within the LCB-NREE program, the national projects will complement the baseline to support countries and the LCBC achieve SAP/NAP priorities and realize the Lake vision. The regional project that addresses governance, synergy and cooperation for shared basin management will thus be completed by the child projects, each with their own field investments based on underlying considerations for ecosystem stability and functioning. The factors and actions (climatic, human, etc.) that result in declining water quantity/quality and basin productivity are given full consideration through GEF funding. Activities aim to promote an integrated approach to environmental management that simultaneously addresses food security, biodiversity conservation, and climate change mitigation. In working to

improve sustainability of the productive capital (soils, vegetation, biodiversity, water) and the living conditions of rural populations, the GEF funds add needed considerations to the baseline.

The PRESIBALT focuses particularly on the regional and national levels while GEF Niger activities will target both the community and department levels. GEF resources from the LD, BD, CCM and SFM Focal Areas will be associated to the PRESIBALT and will support and enhance sustainability of the baseline. Their complementarity will help secure the supporting and regulating ecosystem services that are critical for enhancing agro-ecosystems of Diffa and the protection of habitats within the Lake Chad Basin. The project will build on the baseline and will bring value-added by adopting a longer-term vision of landscape protection based on an integrated approach that takes into account the characteristics of local agro-sylvo-pastoral systems and the socio-economic factors affecting land use. For Niger, the focus will be on communities within the Diffa region and Komadogu-Yobe sub-basin that are directly linked (by surface and groundwater systems) to the Lake Chad basin, with the river feeding the lake and communities whose land use activities have an impact on the tributaries and Lake itself. Any programs for the protection of Lake Chad must integrate sub-basin planning and INRM, given regional environmental problems transcend national borders. Major investments in the baseline are related to lake protection measures such as dunes fixation and anti-erosion works. Other baseline investments are geared towards improving access to food and markets, with a focus on socio-economic infrastructure and value chain development, but less so on the local drivers of environmental degradation. Less attention is given to aspects of land degradation, biodiversity loss and deforestation, and all their ramifying effects on basin resources, including aquifers. GEF funding is sought to address this critical gap.

The GEF alternative focuses on the integration of conservation and resilience into the landscape. Investments in land, water and forest management with considerations for biodiversity; better resource use planning; and low carbon energy options that reduce pressure on natural resources (particularly forests) will be promoted. GEF funded interventions in SLWM and SFM, with considerations for biodiversity, local needs and natural characteristics, will strengthen critical field level aspects, arising incremental to baseline work to improve water flow, water supply, and value chain development. Support must be provided to subsistence farmers to implement low-tech methods that improve soils and conserve water and forests in addition to improving infrastructure and market linkages. While baseline activities look to increase the value of agriculture produce, processing and marketing, the GEF increment will enable PRESIBALT to intensify and upscale sustainable and conservation-focused NRM practices with the participation of relevant actors. GEF funded activities will complement socio-economic infrastructure by addressing the interface between ecology and agriculture. Activities to expand vegetative cover will help reduce the impacts of poor land-use practices both on soils and on waterways, and will also work to restore agricultural lands, maintain canal health, and protect wetlands within the basin and sub-basins, critical to local biodiversity. GEF will also supplement and link the value chain development activities of the baseline with its activities in livelihood diversification (and production of biodiversity-friendly goods) and integrate enhanced considerations for the adaptive capacity of ecosystems and communities. The resulting cumulative effect of enhanced green cover will rehabilitate soils, enhance carbon stock, and result in reduced GHG emissions from land degradation and deforestation, delivering both local and global benefits.

The GEF alternative will also incorporate and mainstream biodiversity conservation into local planning and management practices at sub-district and department level. Decision-making tools (mapping, land use plans) that will enhance SLFM with underlying biodiversity considerations will be incremental, and will help promote the linkage between economic growth and biodiversity. The project will provide a basis for further advocacy of and raising awareness about the value of landscape-based approaches which can help decision makers internalize the approach in long term planning once its benefits prove clear. By allowing the project to work across stakeholders, including government, communities, and civil society groups, the GEF project will share lessons learned and develop best practices to be promoted at other scales, for example within sector ministries to support future improved extension support to farmers, budget allocations and policy reforms.

SLWM and SFM activities will also constitute an entry point into local communities, and help secure their participation and ownership of the larger program which can bring more permanent solutions. The GEF funds will make it possible to adopt a more community driven and participatory approach in which people themselves are involved in the planning and management of natural resources, an aspect that is not strong enough in the baseline. At the local level in the project zone, the project will mobilize communities, strengthen local capacity, support participatory planning, and invest in locally suitable SLWM techniques. GEF funds will also allow integration of pastoral considerations into the Niger

project, a sector that does not figure in the baseline but is critical to local livelihoods and environmental protection. Recognizing the extent and the consequences of environmental degradation in Diffa, the GEF increment is intended to complement the PRESIBALT by financing targeted investments in innovative techniques for crop/rangeland management at key agro-ecological sites and promoting sustainable agriculture.

Efforts to promote sustainable agriculture meet with severe structural challenges in Diffa resulting from a combination of factors relating to agro-ecology, climate change, lack of infrastructure, and high poverty levels. These factors particularly increase the populations' vulnerability to food insecurity. The GEF funds will allow the project to address these challenges and promote on the ground interventions based on community, household and gendered needs. SLWM measures such as crop diversification also create alternative livelihoods and income diversification, based on food and revenue derived from healthier and diversified production bases, which also contribute to reducing pressure on natural resources. Without the GEF incremental activities there will be no targeting of the underlying problems affecting the Lake Chad basin and sub-basins in Niger, and of the barriers to the protection of Lake Chad, including population pressures, low environmental awareness, and low knowledge at institutional levels.

GEF funding will also ensure technical assistance and capacity building at different levels and in related needs, including on SLWM agro-ecological techniques and principles for implementers and service providers. Building capacities in local communities will ensure decentralized and sustainable rural development that can reduce the region's poverty index. Capacity building within institutions and communities will target incremental issues in knowledge and awareness (INRM, adaptation, soil conservation, water use efficiency, etc.) and will rise incremental to the baseline social sensitization campaigns. Resources are scarce and meeting basic needs is the more urgent priority for the population. Incremental GEF financing is therefore necessary to ensure that sustainability and conservation are integrated into productive landscapes.

The GEF increment also adds a low carbon/renewable energy/mitigation dimension to the baseline (incremental to baseline green technology pilot undertakings), as a way to indirectly enhance vegetative cover and further reduce deforestation. CCM-related interventions will result in reduced exploitation of woody resources, improved carbon sequestration in soil and trees, and reduced land use practices and change that lead to emissions. The CCM funds will support the adoption of renewable and low carbon energy alternatives (solar pumps, improved cook stoves) to traditional approaches for agricultural and domestic use, resulting in reduced demand for fuelwood, charcoal production and use. This will include technical support in addition to technology transfer. SFM funds will also ensure that the alternative energy sources are linked to forest protection and improved management activities, and also the LD, BD and livelihood diversification activities, for a truly holistic approach based on connectivity between ecosystems. They will help protect and secure forests so critical to the Lake Chad basin (e.g. trees help maintain biological functions and water cycles).

Without the GEF alternative, it is improbable for the larger program to effectively address multiple national environmental challenges, nor, given Diffa's high level of rural poverty, that communities would prioritize medium and long-term investments in sustainable NRM. The GEF funds will allow the project to promote best practices in agriculture and rangeland management that contribute to the regeneration of vegetation cover and soil fertility in order to prevent land degradation and biodiversity loss, thus better contributing to the larger scale protection of the threatened regional Lake Chad basin. Without GEF funds, integrated landscape perspectives and biodiversity will likely not be emphasized in local NRM planning, and key habitats of regional and global importance could see irreversible degradation over time. The project addresses the pressures on natural resources from competing uses at the landscape scale, raising awareness of the close interconnectivity of systems in a transboundary context. Without the integrated approach provided through the GEF operation, the project could not amass the same degree of extensive, multiple benefits to stakeholders and the environment.

Without GEF, the integrity of Niger's Diffa landscapes, particularly its croplands, woodlands, rangelands and wetlands, will continue to degrade, and inappropriate resource use will continue to the detriment of environment and livelihoods. Land-use competition between pastoral, agricultural and wildlife activities will intensify. As areas continue to experience population growth, natural vegetation will be systematically cleared for food production. These unsustainable patterns are reinforcing poverty and curbing the future sustainable growth of the regions and country as a whole. With GEF, actions to sustain ecosystem productivity over time without harming biodiversity will be enhanced.

The objectives of regional programs for Lake Chad need to spring from national actions to curb the extreme vulnerability of resource users and Sahelian ecosystems. With GEF funds, the project will work to sustain the ecosystem goods and services provided by drylands on which rests the food security of those who depend on their availability and quality. The aim is to integrate environmental considerations into the culture of farmers and other stakeholders for scale-up and transformation.

The GEF project increment to the baseline will deliver multiple local and global environmental benefits which otherwise would not be realized. Moreover, the incremental activities aim to conserve and manage landscapes with consideration for the anticipated impacts of climate change (particularly drought, and its impact on water availability and agro-ecosystem productivity).

Global Environmental Benefits (GEBs)

The GEF increment centers on securing ecosystem goods and services from a protected and regenerated landscape, and reducing pressure on natural resources and habitats, including water bodies, wetlands, and dryland forests. The Niger project will address the interconnectivity between ecosystems and livelihoods thereby generating and delivering local, national, regional and global benefits across GEF focal areas. GEBs will arise directly from a restored landscape with concurrent environmental and local socio-economic benefits. GEBs will be generated in multiple GEF focal areas while simultaneously advancing the Government of Chad's main development objectives for poverty reduction as well as commitments to environmental conventions.

The project aims to promote practices that will restore the integrity of Niger's southern ecosystems and conserve the agro-sylvo-pastoral patrimony of these areas. Global benefits will accrue from healthy production landscapes. Activities will deliver environmental benefits by reducing land degradation, protecting biodiversity, and reducing terrestrial carbon emissions through enhanced vegetative cover, improved soil fertility, and better water availability. Local socio-economic benefits will center on enhanced food, fuel, fodder, and water availability that will derive from the better management of basin resources. The project will contribute to safeguard the provision of critical agro- and forest ecosystem goods and services provided by the Lake Chad basin that will continue to support economic and social development. It promotes conservation of habitats for the benefit of productivity and biodiversity.

The project will also reduce GHG emissions and enhance carbon storage capacity while decreasing the pressure exerted on soils and forests in a Sahelian country facing high trends in deforestation, desertification and climatic instability. Niger's GHG emissions will be reduced through two main ways: reduced deforestation as an indirect benefit of supporting alternative household energy, and re-greening/reforestation efforts as a direct consequence of enhanced cropping, agro-forestry and SLWM/SFM practices that will increase the retention of carbon in soils and trees. By protecting vegetation cover, carbon will be accumulated in various biomass. Alternative energy options to fuelwood and traditionally produced charcoal will be disseminated and further reduce GHG emissions. Project activities thus link local, regional and global climate protection efforts to local development needs. While sustaining agricultural productivity, activities will concurrently promote the restoration and protection of ecosystems of local and global significance. Moreover, although climate change adaptation is not a direct objective of the project, resilience is nonetheless a very strong supplementary benefit with the activities undertaken having very strong positive repercussions on adaptive capacity.

To secure GEBs, the GEF increment will thus specifically finance activities in targeted dryland settings. It will work across sites to help catalyze a transformative shift within production sectors to focus on environmental sustainability. The activities will encourage the adoption and use of techniques that will enhance soil fertility, reduce erosion and water run-off, enhance vegetative cover and soil organic carbon retention potential, and reclaim degraded habitats. With the implementation of sustainable and biodiversity-friendly NRM practices, the project will generate diverse benefits, accruing to productivity, resilience, and biodiversity conservation. The Lake Chad Basin is the second largest wetland in Africa and hosts biodiversity of global significance. It contains significant wildlife of regional and global importance such as gazelles, elephants, hippos, sitatunga and waterbuck. It is also classified as an important bird area and the basin contains floodplains and wetlands which underpin biodiversity and a wide range of economic activities. Yet, these unique, globally significant ecosystems are at risk of severe degradation. The project target areas encompass or are near a number of protected areas and reserves, and the project will ensure reduced pressure and encroachment. Activities will indirectly reduce stress on ecosystems and wetlands within the Nigerien side of the basin, including the Lake Chad

itself, and along critical riverine habitats of the Komadogu-Yobe. These are areas which also harbor important, sometimes threatened species (e.g. forest steppe, local fauna and flora).

Niger project activities will additionally have a critical beneficial influence on preserving the quality and flow of water within the Lake Chad basin. Water input to the Lake is primarily dependent on its major tributaries. Moreover, freshwater shortage has impacted heavily on the Basin's economic activities (fisheries, agriculture, animal husbandry, and wetland services), creating insecurity and conflict. By improving livelihood options, cultivation and water management, along with stabilization measures, GEF activities will help reduce sedimentation, water extraction and maintain water balances, thus contributing to the larger scale protection of the threatened Lake Chad. Hence why national projects are so critical to achieving regional IW objectives. Regional objectives are built on national action, which is the idea underlying the GEF program.

Through the three project components and in line with a GEF multi-focal strategy, the Niger project will aim to achieve the following impacts: (i) an increase in land managed sustainably that integrates biodiversity conservation; (ii) sustained productivity of agro- and forest ecosystems in support of human livelihoods; (iii) improved forest management and protection in drylands; (iv) landscape restoration and basin conservation with sustained productivity and functionality of agro- and forest ecosystems; (v) conservation and sustainable use of biodiversity integrated into production landscapes; (vi) reduced GHG emissions resulting from land and forest degradation; (vii) increased investments in renewable and low carbon energy technologies; (viii) effective provisioning of forest ecosystem services; (ix) protected natural habitats of the basin (wetlands, rivers, lake, etc.); (x) increased availability and quality of water.

Specific GEBs as a result of the Niger child project are:

- A total of 1700 ha under SLWM (sum of below) increased with enhanced productive and protective capacity:
- 800 ha under improved crop, water management and bushfire management;
- 400 ha under conservation agriculture;
- 200 ha of degraded rangeland restored/revegetated;
- 300 ha under agro-forestry;
- A total of 900 ha under SFM (sum of below):
- 300 ha of degraded forest landscape restored and 300 ha under ANR;
- 300 ha of dryland forest sustainably managed through management plans;
- Increased quantity and quality of forests in dryland ecosystems;
- Change/increase in vegetation cover in targeted sites;
- Improved provision of agro- and forest ecosystem goods and services;
- Increased application of sustainable NRM across Diffa landscapes
- Reduced rates of deforestation in targeted landscapes (decreased fuelwood consumption through alternative energy technologies and forestry activities);
- Reduction in land degradation and desertification (measured by reduction in soil erosion, biomass gains and other indicators), with restored/stabilized ecological functions;
- Net gain in forest area managed in a sustainable way and the improvement of select forest ecosystem services such as habitat services (biodiversity), regulating services (carbon) and productive services (soil, livelihoods);
- Reduced GHG emissions from agriculture, deforestation and forest degradation and increased carbon sequestration in soils, trees, and other biomass;
- GHG emissions reduction resulting from alternative energy solutions, forest regeneration, and increased vegetative cover: **152,905** tons of CO2 equivalent avoided (both direct and indirect); - **Please see attached EXACT model for calculation details and EE GHG calculation file**
- Reduced pressure on ecosystems (wetlands, forests, etc.) and protected areas, with habitats, wetlands and biodiversity of local and global significance better conserved;
- Reduced vulnerability of ecosystems to climatic change and variability, especially drought, and human stresses.

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 and management challenges for complex multi-focal 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 and local organizations in the implementation of activities through their participation in field level activities and capacity building at local level. A strong M&E framework will be complemented by GEF tracking tools and AfDB supervisory missions.

In light of current cross-border insecurity and particularly the Boko Haram activity in the region, project sites were identified and selected bearing in mind security considerations. Partners continue to implement rapid-results projects in these areas mainly through local service providers and NGOs, and AfDB will also resort to such partnerships to enhance reach. These risks are very much taken into account and the project will retain flexibility to adapt. Project design has consulted Nigerien stakeholders and drawn on previous experiences of GEF funded projects in the Lake Chad Basin.

Risk	Level	Mitigation measure
Institutional weakness of the LCBC and national institutions 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 of the IW child project is meant to target these gaps and needs. More effective governance structures will arise from IW component 1. The program also aims to build LCBC's abilities in project management, procurement 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 INRM and transboundary policies	M	Provision of INRM guidance coupled with specific training to empower stakeholders at both national and regional levels. Demonstration activities in INRM will additionally promote linkages with awareness raising and capacity development initiatives.
Inadequate regional cooperation for good management of shared resources	M	The coordination structure for stakeholders and partners to be established under the regional project will enhance collaborative aspects at basin level. A mechanism will be purposely set up 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 INRM, 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 and child projects.
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 activities 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	L	Sensitization of States and beneficiaries on effective participatory ecosystem

sustainable ecosystem management by States and communities		management from project start. Community based planning methods will be used to prioritize needs and allocate interventions with consent. Enhanced environmental awareness and beneficiary contributions will prove additionally beneficial for long-term INRM.
Low capacities of NGOs identified as executing partners	M	Training of trainers will be done. Government services and technical experts hired as consultants will be involved in implementing project activities.
Projects become source of conflict locally, particularly between farmers/herders and nomadic/sedentary communities	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 use 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 frequency of droughts and irregularity of rainfall in Niger pose threats to planned activities but these are the very issues the project is meant to alleviate. The project has an underlying focus on resilience and adaptation given the basin lies within the Sahel and depends on numerous environmental factors. The project will integrate considerations for enhanced adaptation to climate change, with the overall goal of strengthening both the basin and human 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.
Population displacement within Niger due to changes in the availability of water and fishery resources in Lake Chad and the Komadogu-Yobe river	M	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.
Insecurity and political instability may affect implementation of activities at country level, with recent escalations of violence in the Lake Chad region, and increased displacement of populations	H	The AfDB's secured access criterion was taken into account during selection of project 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. The Diffa region borders the northern states of Nigeria where Boko Haram hides. The presence of Boko Haram also underscores the necessity of such interventions.

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.

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 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 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), IUCN, and World Bank. A number of their 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 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.

The project 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 trans-boundary 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: ‘Organizational advisory services for the Lake Chad Basin Commission’ and ‘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 sub-project ‘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: Waza-Logone Pilot Project and Komadogou-Yobe management plan implementation project.

The AfDB-GEF project will coordinate with other complementary initiatives in Niger as well. These projects will be able to provide valuable lessons on best practices that can be scaled up nationally and regionally:

- World Bank-GEF: Sahel and West Africa Program (SAWAP) in Support of the Great Green Wall (GGW) Initiative, a 12 country program with the main objective to expand SLM in targeted landscapes and in climate vulnerable areas, and the Niger related project WB/GEF ID 5252: ‘GGW: Third Phase of the Community Action Program’;
- FAO-GEF ID 4702: ‘Integrating Climate Resilience into Agricultural and Pastoral Production for Food Security in Vulnerable Rural Areas through the Farmers Field School Approach’;
- UNDP-GEF ID 3916: ‘Implementing NAPA Priority Interventions to Build Resilience and Adaptive Capacity of the Agriculture Sector to Climate Change’;
- IFAD-GEF food security IAP project for Niger: ‘Smallholder agricultural development program’ and its IFAD baseline projects PASADEM and RUWANMU;
- The AfDB’s ‘Projet de développement local de la région de Diffa (PADL)’, recently completed, aimed to contribute to food security and poverty reduction by improving the conditions of livestock production and increasing agricultural output in the Diffa Region on a sustainable basis. The project was largely based on experiences previously acquired in the region from other development partners and was considered a success; as such, this GEF project will build on PADL foundations for lessons and effectiveness.

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 (farmers, herders, fishermen) 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 development partners in natural resource development and management actions. Communication, consultation, and community participation during planning and implementation are key for the success of projects. 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 the local populations and decentralized national services were actively involved in the TDA, the definition of SAP priorities and subsequent AfDB program/project designs. Activities were defined in order to also meet the priority needs of beneficiaries and expressed in the FYIP and Water Charter. Not only were the populations, technicians and local authorities involved in the identification of sites to be developed and protected, they also conveyed their own knowledge and perceptions of environmental phenomena.

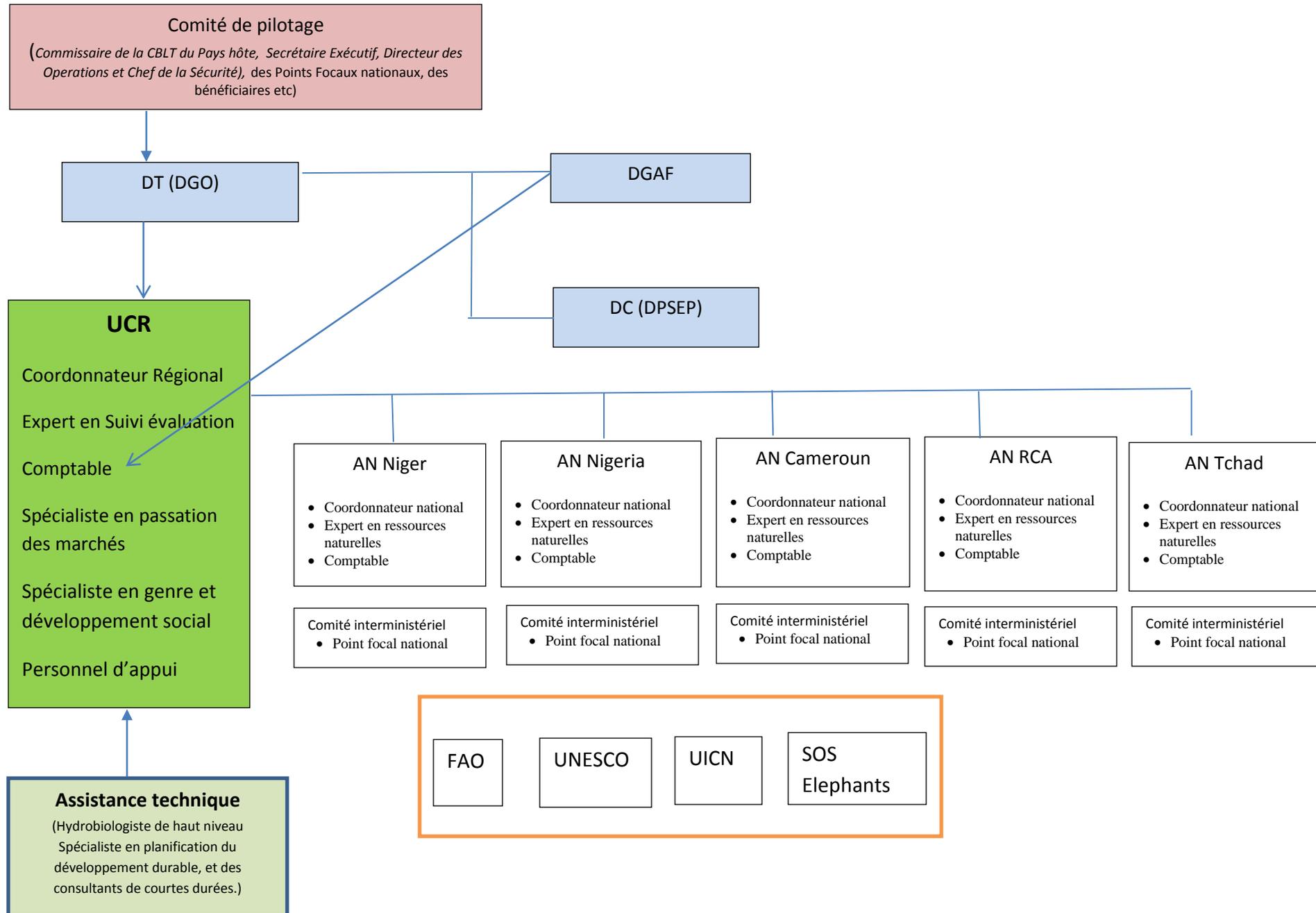
PRESIBALT has been developed on the basis of an integrated and participatory approach to increase ownership of the program by the beneficiaries. The program was designed following consultations (discussions and workshops) with various stakeholders (regional and national institutions, partners, communities, 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 communities and associations for the implementation of envisioned activities. 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 agro-sylvo-pastoral potential. It will also help to improve the livelihoods of the most disadvantaged populations, women and youth in particular, and to diversify their 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 partners 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 flooding 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, GIZ, WB, etc. for synergy. In Chad, main stakeholders involved in project implementations at local level include communities, CSOs/NGOs, professional associations, traditional authorities, and ministries or state decentralized agencies (for water, agriculture, energy, etc.), such as the Office national des aménagements hydro-agricoles du Niger, Ministry of Agricultural Development (MDA), Ministry of Water Supply, Environment and Desertification Control (MHE/LCD), and the High Commission of the 3N Initiative. Communities will participate in the activities to develop and manage the social infrastructure, community interventions and GEF demonstration activities, while local NGOs will facilitate capacity building and awareness training, and the dissemination of practices and lessons learned. The LCBC will additionally need to 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 security-dictated needs. Different components or 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 project targets subsistence smallholders and pastoralists most exposed to environmental degradation. In Niger, direct beneficiaries will be about 50,000 people. Whenever possible, activities (particularly capacity building) will be implemented through civil society organizations to enhance reach and acceptance. 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.

Through its various activities, the Niger project will cover many communities and areas of the region, with particular focus on the departments of Diffa and Maïné-Soroa that cover important regional production areas and cover the water bodies of the Lake Chad basin. Apart from pastoralists and farmers, the project will mobilize a large number of rural stakeholders, including local elected representatives, decentralized services staff, producer extension officers, farmer organizations, and village committees.

Project implementation will reinforce a participatory approach through immediate sensitization, information and experience sharing with local communities and producer associations that will benefit from the LCB-NREE. These participatory consultations will provide a platform to discuss the expected role of communities in its implementation. During the project validation workshop in N'Djamena, Chad, on April 27–29, 2015, a Nigerien delegation attended and made useful suggestions on how the project should be implemented in Niger. They provided suggestions on outputs and activities for the project in their country.

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, which are closely interdependent. 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 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 INRM 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 INRM, 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 rain-fed 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 terrorist groups. The program will also help to improve regional consultation and cooperation for IWRM, which will in the medium and long terms 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; (vi) improved food security, health, life expectancy, work load for women, and other benefits arising from increased social services and infrastructure.

INRM helps to manage and develop resources in a sustainable and balanced way, taking account of all the different social, economic and environmental interests. As such, the INRM activities 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 safeguard procedures, given the nature of 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.

Gender: The riparian countries of Lake Chad are among those with the highest gender inequality rates, ranging from the CAR, ranked 115th in the world in 2013, to Niger, ranked 146th the same year. The lake region is among the poorest in Africa. 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. 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. 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's 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.

Niger's rapid population growth is a major challenge to environmental preservation. The population census of 2012 showed that Niger has an annual population growth rate of 3.9%, which is one of the highest in the world. This growth rate is mainly due to a high fertility rate of about 7.6 children per woman. Such a population dynamic poses significant challenges in the areas of agriculture, environment, drinking water, health, education, employment, and housing. Moreover, unemployed young people in this part of the Sahel constitute a breeding ground for extremists.

The level of poverty in the Diffa region is high. The educational system is characterized by insufficient school infrastructure and a very low enrolment rate (30%). This rate is marked by wide disparities between rural and urban areas, between girls and boys, and between nomads and sedentary people. Poverty often constitutes an impediment to schooling since education represents a loss of income for families, particularly among stockbreeders where the child plays a key role in herding. In terms of health, the region has inadequate infrastructure and chronic malnutrition (height/age index) affects over half the children in rural areas regardless of any food crisis. Diseases that cause maternal and child mortality partly arise from poor hygienic and environmental health conditions, inadequate access to drinking

water, and low household purchasing power. Women are particularly disadvantaged and are particularly affected by poverty. They have limited access to land, credit and social services.

Gender disparities persist in education and labor. On the economic front, women are more active in the agricultural sector, especially in the production and marketing of agricultural products. In addition to the numerous time-consuming domestic chores, Nigerien women participate in productive activities. They take part in farming, particularly in sowing, maintenance, harvesting and de-husking of crops before processing. On irrigated cultivated plots, they also take part in planting and maintenance tasks as well as harvesting. Women are generally responsible for small livestock rearing (poultry and sheep) and undertake milk processing in times of surplus production. Women also have small individual plots on which they grow crops such as okra, sorrel, chili pepper, marrow, etc. They use the incomes generated to cover their own needs and those of their families. However, their full participation in productive activities is hampered by their limited access to fertile land and access to credit. Consequently, women are the most vulnerable to food insecurity, especially in the rural area. Due to a marginalization of Nigerien women in general and the women of Diffa in particular, in the day-to-day affairs of the community, traditional and religious practices, they are rarely involved in decision-making processes. Women can only possess land through inheritance or donation. The vast majority of them are illiterate (92.7% for Diffa) and this impedes their involvement in formalized structures and processes.

The program will work to mainstream gender in all its components, including through equitable access to productive resources and planned capacity building activities. Women's integration and ownership will be promoted in basin resource users' forums and a gender-sensitive 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 working in the investment and demonstrations activities and the number of women participating in the trainings will be monitored. The capacities of LCBC and gender-related stakeholders will be strengthened by recruiting a gender and socio-economic development specialist in the Regional Coordination Unit to enhance training and mainstreaming 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). Further, 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.

The Niger project will provide concrete socio-economic benefits to smallholders in Diffa, both men and women. About 50,000 people will directly benefit, corresponding to 12% of the regional population. The investments, capacity

building, technology transfer, and knowledge management will specifically also target women and vulnerable groups. The project will assess and build on the diverse or common needs of both men and women, basing interventions on gender differentiated contributions and needs during the design, implementation and M&E. Women will be the main beneficiaries of several of the community level activities since they will focus on initiatives and products that are of particular concern to women and in which women have a recognized know-how, including the development and use of non-timber forest products, efficient cooking stoves, and income generating activities emerging from diversified production from crop and forestry, with adapted and professional, technical and social training. Activities could promote their long-term economic empowerment. Women in these areas do most of the fuelwood collection, tend gardens and cook and will therefore greatly benefit. Gender-sensitive facilities, SLWM and SFM practices deliver a number of benefits such as improved yields/food crops, new crops, energy security and fodder/fuel availability, also reducing wood collection time for women. Communities will benefit from increased production and access to forest products especially fuelwood, lumber and byproducts. In addition, the implementation of locally appropriate SLWM practices will enable farmers and communities to adapt and become more resilient to climate change by securing productive assets and services. Some of the activities will result in new sources of employment and stable incomes, including for young people who are increasingly tempted by migration and by terrorist groups. Locals will directly benefit from the training programs associated with field investments. Engaging local communities in ground activities will contribute to building social capital in the region and acceptance of new technologies and practices, for longer term impact on the environment and livelihoods.

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 perspective 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 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 (INRM).
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: (Please note that this M&E activities and budget is valid for all child projects included in this PFD. The GEF funding is implemented as part of the PRESIBALT as a component and within the same PIU).

Report type	Prepared by	Responsibility	Preparation frequency/period	Submission	Budget (\$) excluding PRESIBLAT M&E co-financing
1. Activity reports	PIU Staff	PIU Coordinator	Per Reporting cycle agreed with the GEF	AfDB	50,000
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	5,000
5. Terminal Evaluation	Independent consultant	PIU / AfDB	After project completion but no more than 12 months after	GEF Evaluation Office	10,000
6. Project Completion Report	PIU Coordinator	PIU Coordinator	End year of project completion date	AfDB / GEF Secretariat	AfDB staff

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 DGPS 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 the regional IW-funded component of the LCB-NREE program will be, inter alia: adoption/implementation of policy and legal regulations and plans at national and local levels that show progress towards IWRM/INRM; water use efficiency improvements; protected wetlands; inclusion of aquifers, groundwater and climatic change issues in strategic frameworks and operations; 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; increases in revenue, disaggregated; 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, which will thereafter be aggregated at program level. For the 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); 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 OPF endorsement letter).

NAME	POSITION	MINISTRY	DATE (MM/dd/yyyy)
Mr. Zouladaini MALAM GATA	Commissioner in Charge of Development NIGER	MINISTERE DE L'ECONOMIE ET DES FINANCES	9/12/2011

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 Assouyouiti, AfDB		05/18/2016	Bamba DIOP	+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 (prepared May 2016)
Comments from GEF Secretariat on LCB-NREE PFD (original date of review 15/03/2012)	
<p><i>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.</i></p> <p><i>Cell 28 Items</i></p> <p><i>1) Please, confirm the cofinancing and document in detail. It should only involve activities that are aligned with the GEF objectives.</i></p> <p><i>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.</i></p> <p><i>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).</i></p> <p><i>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</i></p>	<p>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. The responses are relevant to each child project.</p> <p>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.</p> <p>These clarifications were part of the tasks under the PPG and have been addressed during the design of the program. The cofinancing 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 (regional), and GEF5 strategies for LD, BD, CCM and SFM (national).</p> <p>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 strategies. The PRESIBALT is not controversial itself, and it forms a very suitable baseline for the GEF increment. AfDB national projects that had been identified in the PFD as additional baselines are not considered as co-financing anymore.</p> <p>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). Activities will focus on water use efficiency and SLWM. Strong monitoring frameworks will be established to mitigate ecological risks, with sufficient safeguards developed (for e.g. to prevent invasive phenomena in demonstrations and child projects for agriculture or pastoral activities).</p> <p>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</p>

<p><i>demonstrations, Wetland management and protection as well regional IWRM knowledge management would be among eligible activities)</i></p> <p>5) <i>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.</i></p> <p>6) <i>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.</i></p> <p>7) <i>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.</i></p> <p>8) <i>Please, detail the monitoring at project and program level.</i></p> <p>9) <i>Please provide EIA to make sure that the suggested pumping of groundwater resources will not affect the lake and groundwater level negatively.</i></p>	<p>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.</p> <p>These comments have been taken into account in each child project falling under the program. The incremental reasoning and GEBs are explained in detail in section A.5, to show how GEF funding builds on the baseline (well described in A.4).</p> <p>For each national child project, carbon emission benefits and other benefits have been identified under the section on GEBs. GEF funding from LD, BD, CCM, and SFM is justified in section A.2 and A.5.</p> <p>This has been done during the preparation of child project components on renewable energy that use CCM funds. Please refer to child project outputs and descriptions.</p> <p>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.</p> <p>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 procedures will be developed or revised and adopted by the LCBC with a common methodology for all basin interventions, thus analyzing and reducing risks arising from any intervention in the basin (including on groundwater withdrawal, irrigation and agricultural development projects, etc.)</p>
<p><i>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".</i></p> <p><i>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.</i></p>	<p>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.</p> <p>Please see below for detailed addressing of STAP comments.</p>

<p><i>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.</i></p> <p><i>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.</i></p> <p><i>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, and technical capacities of all stakeholders at regional and local levels, are typically eligible under a PPG.</i></p> <p><i>Confirm that a M&E and a capitalization strategy will be developed.</i></p> <p><i>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.</i></p> <p><i>Some type of carbon monitoring system is expected. Please confirm that this item is included in the tasks.</i></p> <p><i>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?</i></p> <p><i>Please, explain how the tradeoffs will be handled if the activities are done in separate analysis.</i></p> <p><i>Please remind that the funding from CC is for mitigation. Confirm that climate resilience issues are considered.</i></p> <p><i>The activities 1-5 are welcome in a PPG (institutional analysis, component studies, environmental and social analysis, climate risk analysis, stakeholder consultation).</i></p> <p><i>Please note that GEF resources cannot be used for coordination and management costs for a PPG (see p.2 and p.6).</i></p>	<p>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.</p> <p>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.</p> <p>The comment was noted with thanks and taken into account during preparation of CEO endorsement documents. It is still relevant with the new baseline.</p> <p>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.</p> <p>These are addressed in the child projects that use CCM and SFM/REDD+ funds. Credible estimates have been made.</p> <p>Comments were addressed in PPG request document. PPG development of TORs for consultants/experts reflected these issues and needs.</p> <p>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 investments in renewable energy. The program in general reflects consideration for climate change adaptation, critical in the Sahel and Lake Chad basin, and given the recent preparation of the LCDAP.</p> <p>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.</p> <p>Comment was addressed in PPG request document.</p>
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<p>2. <i>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.</i></p>	<p>Comment was addressed in PPG request document.</p>
<p>6. <i>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.</i></p>	<p>Comment was addressed in PPG request document.</p>
<p><i>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 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.</i></p>	<p>Comment was addressed in PPG request document.</p>
<p><i>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.</i></p>	<p>Comment was addressed in PPG request document.</p>
<p><i>Table D - The part devoted to international consultants seem high. Please, justify or decrease the budget.</i></p>	<p>Comment was addressed in PPG request document.</p>
<p><i>GEF resources cannot be used to finance coordination (cf \$40,000 in the table D).</i></p>	<p>Comment was addressed in PPG request document.</p>
<p><i>We understand that the program needs to develop consultation at regional, national, and local levels. Please, justify the amount of \$80,000 for consultations.</i></p>	<p>Comment was addressed in PPG request document.</p>
<p><i>Please note that there are discrepancies in the cofinancing between the table B and the table D (respectively \$330,000 and \$150,000).</i></p>	<p>Comment was addressed in PPG request document.</p>
<p><i>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).</i></p>	<p>Comment was addressed in PPG request document.</p>
<p><i>80 weeks of international consultants at US\$ 3,000 seem a high amount. Please, justify or reduce.</i></p>	<p>Comment was addressed in PPG request document.</p>
<p>Comments from Council (originally dated November 2011)</p>	
<p>Work Program: Comments From Council Members (Reference GEF/C41.08)</p>	<p>AfDB response May 2016.</p>
<p>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</p>	<p>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</p>

<p>project documents. We welcome every opportunity in which close cooperation between GEF projects and German bilateral cooperation as well as cofinancing agreements are feasible.</p> <p>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 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.</p>	<p>(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.</p> <p>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.</p>
<p>Comments from STAP (original date of review 8/10/2011)</p>	
<p>II. STAP Advisory Response Based on this PIF screening, STAP's advisory response to the GEF Secretariat and GEF Agency(ies): Major revision required</p>	<p>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.</p> <p>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).</p>
<p>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. <i>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.</i></p>	<p>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),</p>

<p>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) <i>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</i>). <i>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.</i></p> <p>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</p>	<p>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).</p> <p>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 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 longer term sustainability of this critical habitat, with a strong emphasis on ecosystem-based management that addresses the nature/human interface.</p> <p>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.</p>
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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.*

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.

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.

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

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.

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.

This is indeed important and 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.

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

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.

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 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.

adoption and implementation of the Water Charter, taking all the necessary measures to encourage its ratification 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 a 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).

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 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 environmental safeguards will make sure that, for example, future pumping of groundwater resources or large irrigation projects will not affect the lake and groundwater

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 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.*

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*

levels negatively.

The final STAP comments on appropriately structured parallel interventions are taken up in child projects as well.

Agreed. The Lake Chad SAP is currently being updated (it is not yet known when this will be finalized) 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.

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.).

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.

<p><i>Commission (LCBC) and International Commission of Irrigation and Drainage (ICID).</i></p> <p><i>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.</i></p>	<p>This issue is addressed in relevant national child projects. It is not applicable to the regional IW project.</p>
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ANNEX C: STATUS OF IMPLEMENTATION OF PROJECT PREPARATION ACTIVITIES AND THE USE OF FUNDS⁸

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

PPG Grant Approved at PIF: \$44,550			
<i>Project Preparation Activities Implemented</i>	<i>GEF/LDCF/SCCF/NPIF Amount (\$)</i>		
	<i>Budgeted Amount</i>	<i>Amount Spent To date</i>	<i>Amount Committed</i>
Institutional Analysis	10,000	9,000	10,000
Component Studies	20,000	20,000	20,000
Stakeholder Consultations	14,550	10,000	14,550
Total	44,550	39,000	44,550

ANNEX D: DISTRIBUTION OF CO-FINANCING FOR EACH CHILD PROJECT

Please refer to PRESIBALT approved document for more details

Country	AfDB approved amount (Unit of Account)	USD equivalent
CAR	2,190,000	3,394,500
Cameroon	12,500,000	19,375,000
Chad	5,350,000	8,292,500
Niger	13,330,000	20,661,500
Nigeria	20,450,000	31,697,500

⁸ 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 E: KEY INFRASTRUCTURES PLANNED UNDER PRESIBALT CO-FINANCING (EXCLUSION OF GEF FUNDING)

Infrastructure/Goods	Unit	Cameroon	Niger	Nigeria	CAR	Chad	Total
Rehabilitation of the Flood Plains	Km ²	445	0	418	0	0	863
Dredging of the Lake Transport Channels	km	80	640	640	0	240	1600
Erosion-Control Developments	ha	2000	2000	4000	500	1500	10000
Hydrological Stations	No.	10	4	16	10	37	77
Land area under SLFWM (including GEF funding)	ha	2,500	2,600	8,000	2,000	10,200	
Agro-metrological Stations	No.	1	1	2	0	1	27
Piezometres	No.	4	16	13	5	2	40
Manometres	No.	3	3	8	2	4	20
Data logers	No.	2	1	2	1	2	8
Satellite Data Treatment Unit	U	0	0	0	0	1	1
Village Irrigation Schemes	Ha	140	20	220	30	190	600
Agropastoral Ponds	No.	0	1	2	0	0	3
Rural Markets	No.	1	10	7	1	2	20
Feeder Roads	km	65	90	140	34	36	365
Multi-purpose Platforms	No.	2	2	2	2	2	10
Education Centres	No.	1	8	1	1	1	12
Health Centres	No.	1	6	1	1	1	11
Mini Rural Electrification Systems	No.	1	1	1	1	1	5
Boreholes	No.	84	90	130	20	36	360
Mills	No.	35	35	55	10	15	250
Smoking Areas	No.	12	12	20	1	5	877
Shelling/De-husking Units	No.	35	35	55	10	15	250
Ice-Making Machine/Cold Room	No.	2	2	4	1	1	10
Threading Workshops	No.	1	0	1	0	1	3
Dairy Plants	No.	12	12	20	2	4	50