CEO Endorsement (CEO) entry – Full Sized Project – GEF - 6

Planning and Financing Adaptation in Niger

Part I: Project Information

GEF ID
8020

Project Type
FSP

Type of Trust Fund
LDCF

Project Title
Planning and Financing Adaptation in Niger

Countries
Niger

Agency(ies)
UNDP

Other Executing Partner(s):
National Council on Environment for Sustainable Development (NCESD)

Executing Partner Type
Government

GEF Focal Area

Climate Change

Taxonomy

Focal Areas, Climate Change, Climate Change Adaptation, Influencing models, Stakeholders, Communications, Private Sector, Type of Engagement, Civil Society, Gender Equality, Gender Mainstreaming, Gender results areas, Capacity, Knowledge and Research, Learning, Private sector, Mainstreaming adaptation, Climate resilience, Innovation, National Adaptation Plan, Community-based adaptation, Livelihoods, Least Developed Countries, Strengthen institutional capacity and decision-making, Convene multi-stakeholder alliances, Individuals/Entrepreneurs, Behavior change, Education, Awareness Raising, Non-Governmental Organization, Community Based Organization, Information Dissemination, Consultation, Participation, Beneficiaries, Gender-sensitive indicators, Sex-disaggregated indicators, Women groups, Capacity Development, Knowledge Generation and Exchange, Participation and leadership, Access and control over natural resources, Enabling Activities, Adaptive management, Indicators to measure change

Rio Markers

Climate Change Mitigation

Climate Change Mitigation 0

Climate Change Adaptation

Climate Change Adaptation 1

Duration

60In Months

Agency Fee($)

847,875

A. Focal Area Strategy Framework and Program

Objectives/Programs	Focal Area Outcomes	Trust Fund	GEF Amount($)	Co-Fin Amount($)
CCA-1	Reduce the vulnerability of people, livelihoods, physical assets and natural systems to the adverse effects of climate change	LDCF	6,052,053	25,400,000
CCA-2	Strengthen institutional and technical capacities for effective climate change adaptation	LDCF	977,297	3,800,000
CCA-3	Integrate climate change adaptation into relevant policies, plans and associated processes	LDCF	1,895,650	2,667,282
		Total Project Cost($)	8,925,000	31,867,282

B. Project description summary

Project Objective

To strengthen national/local institutions and communities capacities in adaptation planning & budgeting while using opportunities of water market to advance local adaptation and resilience in Niger

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing($)	Confirmed Co-Financing($)

1. Improving the planning of adaptation in the water sector	Technical Assistance	Outcome 1: Integrate climate change adaptation in relevant water-related budgeting and planning frameworks at national and local levels	Output 1.1: An operational coordination and consultation mechanism is established to ensure ownership by all actors of the process of mainstreaming CC Output 1.2: National, subnational and local stakeholders understand CCA practices related to sustainable water resources management Output 1.3: Data collection/ production, information and communication mechanisms, are in place for the water-sector NAP Output 1.4: CCA is integrated in relevant planning and budgeting frameworks in the water sector	LDC F	1,370,900	2,667,282

2. Developping field-tested knowledge for IWRM	Investment	Outcome 2: Disseminate economically sustainable hybrid village water systems and multipurpose infrastructures	Output 2.1: Hybrid household water supply solutions and smallholder irrigation systems are promoted and adopted in vulnerable communities Output 2.2: Multi-purpose infrastructures in sensitive ponds and koris to protect equipment and agricultural land from erosion and flooding are installed	LDC F	6,052,053	25,400,000
3. Fostering evidence-based water policy decisions	Technical Assistance	Outcome3: Establish evidence-based knowledge to inform policies and investments on adaptation in the water sector	Output 3.1: Tailored information services and products on water are set up to respond to the private sector and decision-makers audience needs Output 3.2: Knowledge management and M&E systems are established in the water sector Output 3.3: An online community platform is implemented	LDC F	977,297	3,300,000

Monitoring and Evaluation	Technical Assistance	M&E and Knowledge Management	LDCF	154,750	
			Sub Total ($)	**8,555,000**	**31,367,282**
Project Management Cost (PMC)					
			LDCF	370,000	500,000
			Sub Total($)	**370,000**	**500,000**
			Total Project Cost($)	**8,925,000**	**31,867,282**

C. Sources of Co-financing for the Project by name and by type

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Amount($)
Government	CNEDD	In-kind	3,300,000
Government	Ministry of Hydraulics and Sanitation	In-kind	25,400,000
Others	GCF NAP	Grant	2,667,282
GEF Agency	UNDP	Grant	500,000
		Total Co-Financing($)	**31,867,282**

D. Trust Fund Resources Requested by Agency(ies), Country(ies), Focal Area and the Programming of Funds

Agency	Trust Fund	Country	Focal Area	Programming of Funds	NGI	Amount($)	Fee($)
UNDP	LDCF	Niger	Climate Change		No	8,925,000	847,875
				Total Grant Resources($)		**8,925,000**	**847,875**

E. Non Grant Instrument

NON-GRANT INSTRUMENT at CEO Endorsement

Includes Non grant instruments? **No**

Includes reflow to GEF? **No**

F. Project Preparation Grant (PPG)

PPG Required ☐

PPG Amount ($)

150,000

PPG Agency Fee ($)

14,250

Agency	Trust Fund	Country	Focal Area	Programming of Funds	NGI	Amount($)	Fee($)
				Total Project Costs($)		**0**	**0**

PART II: Project JUSTIFICATION

1. Project Description

A. DESCRIBE ANY CHANGES IN ALIGNMENT WITH THE PROJECT DESIGN WITH THE ORIGINAL PIF[1]

Section	Changes since PIF
Global environmental and adaptation problems, root causes and barriers that need to be addressed	The global adaptation problem has not significantly changed since the PIF endorsement. Niger is still one of the most vulnerable country to the impacts of climate change, and is facing an important gap in planning and financing for adaptation. The main change is that, with the focus of the project set on the water sector, the baseline now provides more in-depth information about the vulnerability of water resources. In addition, the selection of sites and communes for the project enabled the identification of specific climate change impacts. In terms of barriers, the Prodoc updated and reformulated the barriers identified in the PIF. - The first barrier "Informational" was reformulated as **Barrier 2**: *Low level of technical knowledge in alternative solutions for improved water management*; - The "Technical" barrier was split between: **Barrier 1**: *Limited availability and poor management of knowledge on identified adaptation options in the water sector for planning* and **Barrier 3**: *Absence of a detailed water institutional framework to better integrate CCA in water resources management;* - The "Financial" barrier was reformulated as **Barrier 4**: *Insufficient evidence-base to inform CCA investments in the water sector and private sector engagement*
Baseline scenario and/or any associated baseline project	Since the endorsement of the PIF, different initiatives were designed and implemented. This enabled the production of knowledge and lessons learned on climate change adaptation options. However, this knowledge has not yet been appropriately capitalized for future use. In addition, the GCF recently approved a NAP project for Niger, that will support the advancement of the NAP process. In light of these changes in the baseline scenario, the PPG carefully took into account new initiatives and clearly mentioned them in the prodoc package to ensure the coordination and the establishment of partnerships during the implementation. One of the main demonstration of this co

	ordination is the selection of the water sector as a focus for this project, considering that the N AP GCF is already supporting other priority adaptation sectors.
Proposed alternative scenario	Since the PIF submission, a number of interventions were implemented and designed in Niger, i ncluding the NAP-GCF project. In order to avoid overlapping, the LDCF project will focus its plan ning and budgeting interventions on the water sector. In addition, under outcome 2, the scale of both outputs was revised: - Under output 2.1, 5 villages will benefit from hybrid water systems. This can be explained as the systems require access to water table resources, and only five of the targeted villages we re responding to the requirements set for the selection of villages (depth of available water tabl e resources that were neither too easily available, making such an investment irrelevant, or too d eep making the investment too costly) - Under output 2.2, following the consultations it was decided that instead of focusing on 3 large scale multi-purpose, that would hardly be replicable and which coverage would be limited, the project would introduce smaller scale infrastructures to benefit a larger range of people. Other minor revisions (rewording) were made since the PIF, including reformulation of compone nts, outcomes and outputs, to clarify them and align them better with the activities.
Additional cost reaso ning	By conducting in-depth studies of the needs, the barriers and the options available, the project d ocument is proposing a well examined long-term solution to the problem. While it was briefly id entified in the PIF, the PPG enabled the formulation of a Theory of change based on on-the-grou nd collected results and extensive discussions with stakeholders.
Global adaptation be nefits	The global benefits were more clearly stated in the Project Document.
Innovativeness, susta inability and potential for scaling-up	Through the studies and the analysis, the project formulation team has designed detailed innov ative, sustainable and scalable outputs, based on the PIF outputs.
Stakeholders	The consultative process adopted for the project formulation has enabled the identification of a large range of partners and stakeholders to engage in the project implementation to ensure a su stainable impact. This engagement across the different sectors is also expected to facilitate the advancement of the NAP process beyond the water sector.
Gender equality and women's empowerm ent	Since the PIF endorsement, the GEF and UNDP have both strengthened their focus on gender is sues and women empowerment. This is reflected in the Prodoc, and the acute challenges wome n are facing have been a leading aspect in the design of the activities.
Risks	The risks were updated and detailed following the changes in the context since the PIF endorse

Risks	The risks were updated and detailed following the changes in the context since the PIF endorsement.
Institutional arrangements	The institutional arrangements were discussed with key national counterparts during the PPG to ensure the ownership of the project at the national level while ensuring an efficient and effective implementation of the project activities.

[1] For questions A.1 –A.7 in Part II, if there are no changes since PIF , no need to respond, please enter “NA” after the respective question.

A.1. *Project Description*.

1) Global environmental and adaptation problems, root causes and barriers that need to be addressed

1. Niger water resources have suffered from the consequences of multiple droughts over the last forty years . The vulnerability of surface water resources to climatic variability has been demonstrated, using flow indices from the Niger River in Niamey, from Komadougou Yobe to Bagara. From 1969 to 1994, there was a 34% decrease in the annual Niger River flows and a decrease of more than 70% in minimum daily flows. The strength of the runoff flow during torrential rains considerably erodes the soil. These runoff waters carry large amounts of sand in the river beds, resulting in the silting of rivers. By comparing pluviometric and temperature data from 59 stations from 1961 to 2004, the 2006 National Adaptation Programme for Action (NAPA) attributed these abnormal fluctuations to climate change.

2. Climate projections reported in the Fifth Assessment Report (AR5) of the Intergovernmental Panel on Climate Change (IPCC) show that Africa’s temperatures are expected to increase by 3-4°C on average (RCP 6.0) across the continent during this century and that this regional trend will be more extreme than the global mean temperature increase. The abnormality of the temperature trends in Western Africa in recent decades was reiterated in the AR5: “Over West Africa and the Sahel near surface temperatures have increased over the last 50 years”.

3. In addition, Global Circulation Models (GCMs) under RCP4.5 to RCP8.5 indicate that mean annual temperature in the Sahel will continue to increase by 2 to 6° C within the next hundred years as a consequence of climate change . In Niger, the study conducted under the Third National Communication (TNC) concludes that the country will experience a temperature increase ranging from 2.5 to 3°C in the next fifty years, mostly due to human-induced climate change . This will result in continuously greater rate of evapotranspiration, causing a reduction in the amount of water available for cultivation, livestock rearing, and human consumption. Inadequate water supplies prevent farmers from continuing normal production practices, which further threatens food security in vulnerable areas due to the high rate of subsistence farming.

4. Rainfall in Niger declined rapidly between 1950 and the mid-1980s and partially recovered during the 1990s and 2000s with the average rainfall in Niger’s crop-growing districts only 8% lower between 2000 and 2009 than the 1920–1969 mean. However, the pluviometric evolution demonstrates that, over the past three decades, rainfalls became increasingly unreliable, both inter-annually and during a particular season. For instance, while the average rainfall calculated over 51 years amounts to 301.2 mm per year, 2011 was particularly marked by a severe drop in annual precipitation (111.2 mm, the smallest amount of rain ever recorded over the entire observation period) . In addition, the dry season duration increased from 50 days to 4 months. Niger receives most of its rain between June and September, with aggregated precipitation usually amounting to above 500 millimeters (mm), providing enough water for crops and livestock .

5. The main anticipated effects of climate change in Niger, due to the unreliability of water access, caused by temperature increase and rainfall uncertainties, are expected to be an overall reduction of food supply and incomes in the agricultural sector, increasing the incidence of malnutrition and famine in the country[1]. Flooding will also further damage housing and crop fields, triggering the degradation of plant cover, the development of *koris*[2] or silting of market gardeners.

6. Rural areas are particularly vulnerable to climate change. While the project's components 1 and 3 have a nation-wide geographic scope of intervention and application, as they target national-level institutional and research mechanisms, component 2 is targeting the most vulnerable communities in the communes, as identified in the NAPA. These communes located in the regions of Zinder, Tahoua, and Tillabery, are the following ones: Tenhiya, Kao, Takanammatt, Tchintabaraden, Tabalak, Ouallam, Tondikiwindi.

7. In the rural communes of Tenhiya (region of Zinder), the communes of Tabalak, Kao, Tchintabaraden, Takanamat (region of Tahoua), as well as in the communes of Ouallam and Tindikiwindi (region of Tillabéry), climate change has severe consequences for the rural population. The variability in the annual precipitation poses major challenges and rainfalls are increasingly erratic, irregular and poorly distributed in time and space. The main activities of the populations, which are farming, agriculture, livestock, trade, crafts and fishing, are suffering from drought episodes. Consequently, vulnerable populations often do not have sufficient access to water for agriculture and drinking.

8. In the communes of Tenhiya, Takanamat, Tchintabaraden, and Kao, the progressive and accentuated silting of the beds of the water bodies and shallow waters, caused by the solid flows carried by the runoff of water collected by the *koris*, is impacting water access for the surrounding population. In Tabalak, the weak capacity of the commune to cope with threats to the pond, as well as the existence of practices that pollute the pond threaten biodiversity. This is also explained by the mis- and uncontrolled use of pesticides and herbicides. In this site, an increasing number of *koris* claws was observed. In the rural communes of Ouallam and Tondiwikindi, a small mesh of modern water points (cemented wells) do exist in order to respond to the needs of livestock (mainly large ruminants such as beef or dromedaries). But again, climate change is affecting these water points, through a decrease in water flows and a progressive silting of the wells.

9. The table below summarizes information on water access in the targeted sites and their vulnerability to climate change, which is the basis for their selection and their prioritization under the NAPA. Indicative villages were identified based on their estimated rate of access to safe and secured water resources, with a focus on villages with less than 25% acess rate. Due to the rapid changes in water access vulnerability, the villages will be reexamined during the starting phase of the project, through discussions with the commune authorities and local populations:

10. In particular, Niger is facing the following barriers for an affective planning and financing of climate change adaptation in the water sector:

- Barrier 1: *Limited availability and poor management of knowledge on identified adaptation options in the water sector for planning*: There is currently no capitalization of the knowledge in this sector through a centralised national database, that would gather inputs from decision makers, local populations, the private sector and research institutes. Without scientifically-based and visible evidence of the benefits of improving climate resilience, decision-makers are not provided with relevant knowledge about successful adaptive practices. Consequently, national and local decision-makers are constrained to a limited number of replicable adaptation practices, and are not able to access a comprehensive set of data on lessons learned at the local level. This also hinders the NAP process, which necessitates detailed knowledge and information on the adaptation solutions available.
- Barrier 2: *Low level of technical knowledge in alternative solutions for improved water management:* At the local level, there is limited knowledge and understanding of the benefits of possible adaptation options for the improvement of water management systems in a context of climate change. This hampers the introduction of alternative solutions by smallholder farmers (ie. drip irrigation, solar/hybrid water systems), and results in limited economic development with increased rural poverty and land conflicts. Additionally, local populations have a limited understanding of the adaptation solutions to address their vulnerability to droughts and floods (ie. bank restoration), causing food and water insecurity, the destruction of crops and livestock, and the dewatering of numerous ponds.
- Barrier 3: *Absence of a detailed water institutional framework to better integrate CCA in water resources management*. The weakness or lack of economic and regulatory instruments (e.g. water pricing systems or efficiency targets) demonstrates the limited awareness of decision-makers about the impacts of climate change on water resources. The integration of CCA is further limited by the weakness of the coordination mechanism and capacity to mainstream CCA into national and regional ministries' staff. In addition, even though the Government of Niger already started the set up of an institutional framework for climate change, informed by various structures, agencies, and committees, the implementation is still weak, due to a lack of capacities and resources.

· **Barrier 4**: *Insufficient evidence-base to inform CCA investments in the water sector and private sector engagement*. CCA, often seen as a mid- to long-term problem, does not benefit from adequate investments in national and regional budgets, and fails to be efficiently monitored and evaluated, including with the use of climate budget lines. This therefore limits the generation and identification of CCA practices for future investments from national and local authorities, as well as the private sector.

2) Baseline scenario and/or any associated baseline project

Planning for adaptation in the water sector

· The Government of Niger made a number of efforts to integrate CCA in planning, including in the 2017-2021 PDES, which Priority Action Plan includes a budget line for the promotion of CCA measures. More specifically, the water sector has been targeted for CCA inclusion, including the 2010 Water Code, the 2005 National Strategy for the Development of Irrigation and Water Harvesting (SNDI/CER), the 2015 Strategy for Small Irrigation , or the National Drinking Water Supply and Sanitation Program (PNAEPA). The country also benefits from the support of the UNDP/SIWI Water Governance Facility to provide the Ministry of Water and Sanitation (MH/A) with human, financial and organizational support, following the GEF funded project “Implementing NAPA priority interventions to build resilience and adaptation sectors of the agriculture sector to climate change in Niger”.

· The implementation and monitoring of environmental policies, including climate change policies, are coordinated by the National Council for Environment and Sustainable Development (CNEDD), created in 1996 and placed under the Office of the Prime Minister. It is supported by an Executive (SE/CNEDD) for the day-to-day management. The CNEDD is responsible for coordinating the NAP process. In the water sector, the CNEA is the technical advisory body of the government in the definition, implementation, and monitoring of sectoral policies.

· In addition, the GCF has recently approved a NAP project for Niger, implemented through UNDP. This project is planning a range of actions to address the main barriers that hinder CCA mainstreaming into planning in Niger: limited institutional, functional and technical capacity; constrained financial, human and material resources; limited synergies and coordination among climate adaptation initiatives; weak monitoring and evaluation mechanisms; and insufficient data availability, reliability and management. It covers 5 sectors to be identified during the inception phase, and, based on discussions for possible synergies with the LDCF project, will exclude the water sector. Through its ground-setting activities to the NAP process and the strengthening of sectors key to the adaptation of the water sector, this GCF project will therefore provide the basis for an improved understanding of climate change in Niger and planning for adaptation.

· However, the current institutional framework in Niger is not entirely operational, presents several weaknesses (particularly in terms of human resources), lacks coordination, and is unprepared with regards to the mainstreaming of climate change adaptation and mitigation. Despite efforts made thus far by the GoN, the inclusion of climate change into development plans, budgeting, and programs for the water sector at the national and local level remains nascent. In addition, there is a lack of coordination of activities to adequately promote integrated water resources management, in particular for agriculture and rural activities, and to take into consideration adaptation into sectoral budgeting framework.

Water access in rural areas

- Due to the lack of facilities, resources, and capacities, farmers and breeders continue to rely on non-resilient and poor water infrastructures and techniques. Under the baseline scenario, rural communities endure important yield losses due to severe climate events such as floods, droughts, and erratic rainfall patterns that are becoming increasingly frequent.
- Even though a few on-going projects (PANGIRE and PHRASEA II, Mekrou II, ZARESE II) are supporting an improved access to water for rural populations, they fail to introduce climate change adaptation concerns, and may have a limited impact in the long term.

CCA knowledge for water policy decisions

- In December 2012, the SE/CNEDD set up a coordination framework for integrating the climate change into Niger's policy planning. However, the provision of scientific information is weakly institutionalized to support evidence-based policymaking. The use of knowledge on adaptation in development policy dialogues and decision-making remains limited due to many obstacles and barriers. This can be explained by several reasons such as policymakers' low level of scientific understanding, a limited interest or knowledge of policy makers in climate change challenges, the limited dissemination of research results, a lack of incentives to use information on adaptation in development policy making, and the lack of institutional channels for mainstreaming adaptation information into policies.
- Under the baseline scenario, integrating science and better assessing the impacts of climate change will be difficult to achieve. The absence of an efficient monitoring and evaluation (M&E) framework will impede scientific knowledge to be effectively shared with policymakers in a timely and appropriate manner. Also, no evidence-based knowledge system will be put in place to guide adaptation policies and investments. This will result in a perception of high investment risk for CCA practices and infrastructures in the water sector, leading to a disinterest from the private sector.

Associated baseline projects

11. The project will build on the following baseline projects to avoid overlapping and ensure complementary interventions. Some of the baseline projects will serve as co-financing, the amounts are indicated in the first column.

Name / Lead Institution / Lessor / Budget	Basic information	Relevance to the proposed project	Opportunities / complementarities
Advancing medium and long-term adaptation planning and budgeting in Niger **Responsible institution**: UNDP, Executive Secretariat of the National Council on Environment for Sustainable Development (SE/CNEDD)	This project is planning a range of actions to address to address the main barriers that hinder CCAA mainstreaming into planning in Niger: Limited institutional, functio	The GC NAP Support project will establish intersinstutional coordination and M&E mechanisms at the national national, level, develop planning and budgeting tools, strengthen technical capacities on	The two projects are complementary in terms of activities and sectoral coverage. The unique institutional anchorage of the two projects, the CNEDD, and the

(SE/CNEDD) **Implementing entity:** Executive Secretariat of the National Council on Environment for Sustainable Development (SE: CNEDD), Ministry of Water and Environment, Ministry of Planning and Finance **Budget**: US$2.9 million **Donors**: GCF **Closing date**: Total proposal period is for 4 years: 2018 – 2022 **Co-financing:** US$2,667,282	nal and technical capacity; Constrained financial, human and material resources; Limited synergies and coordination among climate adaptation initiatives; Weak monitoring and evaluation mechanisms; and Insufficient data availability, reliability and management. It covers 5 sectors.	adaptation planning, and generate knowledge management products and information.	unique implementing partner UNDP will facilitate the establishement of synergies between the two initiatives. The two projects will work jointly to establish coordination mechanisms (Output 1.1), develop training modules on (output 1.2), set up Data collection/production, information and communication mechanisms (output 1.3.), integrate CCA inti planning and budgeting frameworks (Output 1.4), and generate evidence-based water policy decisions (Outcome 3)
The Economic and Social Development Plan (PDES) **Responsible institution**: National Government **Implementing entity**: National Government **Starting date**: 2017 **Closing date**: 2021	The Economic and Social Development Plan (PDES) for the period 2017-2021 is the unified development framework of the country. It can facilitate the promotion of adaptation in sectoral policies and strategies. It is the First five-year plan to operationalize the Sustainable Development and Inclusive Growth Strategy (SDDCI) Niger 2035 adopted by the Government on 9 May 2017	Its Priority Action Plan includes a budget line for the promotion of CCA and CCM measures. The PDES is organized around five major areas that are cultural renaissance, social development and demographic transition, accelerating economic growth, improving governance, peace and security, and sustainable environmental management. It dedicates a whole program to the improvement of development management.	The project will guide the PDES towards CCA mainstreaming, as well as addressing water issues and increasing agricultural benefits, by implementing CCA water actions as the irrigation of numerous ponds,and enhancing the resilience of the agriculture and livestock production (outcome 2).
Improvement of Food Security and Farmer's initiative valorizat	The general objective of	In a Sahelian context, water	By informing local ben

ion in the High Social and Environmental Risks Areas of Niger (ZARESE II) **Responsible institution:** Helvetas Swiss Intercooperation **Implementing entity:** Ministry of Hydraulics and Sanitation **Starting date:** 2018 **Closing date:** 2022 **Co-financing :** US$3,300,000	the project is to contribute to the restoration of production systems in order to improve the living conditions of populations vulnerable to climate change and reduce migration.	management is a key concern for production systems. Water-related adaptive techniques, including spreading thresholds, development of ponds, etc. are providing a solution to climate change for the agriculture sector. The project also works with local communities to improve the protection of their rights on natural resources (including by revising CDPs) and capacitating them on adaptive techniques.	eficiaries about and protecting their rights on natural resources, the project enhances their ownership of the activities. This is a useful lesson learned for the development of a NAP (outcome 1), but also for the formulation of on-the-ground activities (outcome 2). If successful, these practices could be applied in the NAP project.
Support programme for the water and sanitation sector (PHRASEHA II) **Responsible institution:** Helvetas Swiss Intercooperation **Implementing entity:** Ministry of Hydraulics and Sanitation **Starting date:** 2018 **Closing date:** 2022	The objective of the project is to contribute to the improvement of the access to sustainable services of drinking water provision and basic sanitation, by strengthening the capacity of the sectoral actors	The project will focus on the regions of Dosso and Maradi for the improvement of governance and access to water for drinking and sanitation.	The project, including the experience collected during the phase I of the project, will be relevant to the implementation of activity 1.1.4 for the identification and appraisal of on-going water-related climate change adaptation options. These options and experiences will also feed into the outcome 1, by guiding the development of planning and budgeting frameworks in the water sector as well as informing the development of the Water-NAP.
Second phase of the project "water for growth and poverty reduction in the Mekrou sub-basin in Niger"	The objective of the project is to support green economic growth and poverty reduction in the M	The project will provide lessons learned and capacity building at the national and local level on the improved mana	The project is supporting the implementation of regulations at the natioanl level, such as th

Donors: European Commission **Responsible Institution:** Global Water Partnership Afrique de l'Ouest (GWP-AO) **Implementing Entity:** Ministry of Hydraulics and Sanitation (MHA) **Starting date:** 2020 **Closing date:** 2023 **Co-financing :** US$1,100,000	ekrou River basin and its area of influence through integrated and concerted water management in developing areas	gement of water resources.	e PANGIRE by improving the availability of data on groundwater resources and strengthening the capacity on IWRM. The project also intervenes in a regional context, with the alignment with cross-border schemes (Directing Scheme for Planning and Management of Water - SDAGE). The lessons learned for cross-border work will be highly relevant for the development of the NAP on Water (outcome 1).
Integrated Programme for Development and Adaptation to Climate Change (PIDACC) – Niger, Phase II **Donors:** GCF **Accredited Entity:** African Development Bank **Implementing Entity:** Ministry of Hydraulics **Starting date:** 2020 **Closing date:** 2025 **Co-financing :** US$24,300,000	The objective of the project is to contribute to the improvement of the resilience of ecosystems and populations through the sustainable management of natural resources. It promotes the sustainable use of natural resources in the Basin to ensure the protection of existing water resources and their ecosystems, supporting an ecosystem-based adaptation.	The national component of the PIDACC in the Niger Basin will also provide important knowledge, in particular regarding the management of water at the regional level, with lessons learned from the Niger Basin.	The project will be particularly relevant for the outcome 1, by providing important knowledge for cross-border cooperation for water resources. This could be integrated into the NAP-Water for a larger impact through the adoption of a regional approach. On-the-ground techniques will also provide inputs and lessons learned for the activities conducted under outcome 2.
The Climate-Smart Agriculture Support Project	The objectives of the Project are: (i) to enhance adaptation to climate risks, (ii) to improve agric	The project funded by the World Bank is supporting a better management of the agriculture in some targeted com	The proposed project will capitalize on lessons learnt from the formulation process of th

Responsible entity: World Bank **Implementing entity**: Ministry of Agriculture **Budget**: US$ 111 million **Donors**: World Bank **Starting date:** May 26th 2016 **Closing date**: December 31th 2022	ultural productivity among the Targeted Communities and (iii) in the event of an Eligible Crisis or Emergency, to provide immediate and effective response to said Eligible Crisis or Emergency. Project direct beneficiaries are estimated at about 500,000 farmers and agro pastoralists who will benefit from integrated commune sub-projects. Producer organizations, women, youth, and vulnerable groups, and micro small and medium enterprises will also directly benefit from the project activities. It is anticipated that 40 percent of the total direct beneficiaries will be women. The project intervention area covers the regions of Dosso, Maradi, Tahoua, Tillabery, and Zinder	munities. Some of the concerned communities are the same as this proposed project: Tahoua, Tillabery and Zinder. Hence, this World Bank project is supporting the future actions of this proposed project by completing the objective of increasing resilience of these regions thanks to the plan of Eligible Crisis or Emergency.	e Eligible Crisis or Emergency plans in the regions of Zinder, Tahoua, and Tillabery which are the proposed project coverage area. Lessons learnt from this process will inform the formulation of the Local Water and Sanitation Plans (Output 3.3). The Climate-Smart Agriculture Support Project will gain from information generated by the climate vulnerability assessment of targeted communes (Output 1.3)
The **European Union (EU) funded project – under the Global Climate Change Alliance (AMCC) on climate resilience support for a sustainable agricultural development (PARC-DAD)** **Responsible entity**: Global Climate Change Alliance (AMCC) **Implementing entities**: Ministry of Finance, Ministry of Environnement, Local governments of Dosso and Zinder, high commissioner's office **Donors**: European Union	. The specific objective is to enhance the capacity of national actors at various levels to manage food and nutritional security and agricultural development in a more integrated, sustainable and climate-resilient manner. The expected results include both local / regional and central level are the following:At the local level, in the target areas of Dosso and Zinder, field actions should help to strengthen the agro-forestry-pastoral production and sustainable land management and ecosystems with a view t	The project supports (i) the integration of climate change in the municipal development plans (PDC) in targeted municipalities of Zinder, one the proposed project target region, and (ii) the design and effective implementation of a comprehensive system of monitoring and evaluation of initiatives related to climate change.	Experiences capitalized by the population and local decision-makers during the PDC mainstreaming process, will facilitate the development of climate sensitive PLEA by the proposd project and vice-versa. The implementation of the M&E system will benefit of specific support for the water sector provided by the proposed project

Donors: European Union **Starting date**: 05/2015 **Closing date**: 05/2020	o increase resilience to climate risks.		
The **Programme for rural development and productive agriculture: promotion of productive agriculture (PROMAP)** **Responsible entity**: Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) **Implementing entities**: Ministère du Plan, de l'Aménagement du Territoire et du Développement Communautaire **Donors**: German Federal Ministry for Economic Cooperation and Development (BMZ) **Starting date**: 2016 **Closing date**: 2018	The objective of the project is to exploit the economic potential of small-scale irrigation in the Niger's agricultural sector. The project targets the regions of Agadez, Tahou and Tillabery.	The project is supporting the development and implementation of an appropriate small-scale irrigation policy, and will provide training on improved agricultural practices to private and public agricultural service providers, enabling them to offer farmers professional advice. These agricultural service providers can subsequently help interested farmers to develop technical and business aspects of their farms or cooperatives.	The PFNAC will build on the results of the PROMAP, in particular the policy on small-scale irrigation that will facilitate the up-scaling of irrigation practices introduced under the LDCF project. In addition, the strengthening of agricultural practices is complementary to the improved access to water for agriculture. The PFNAC could engage with the trained private and public providers to disseminate good practices in the targeted villages for multiplied adaptation benefits.
The **Programme for Small Irrigation and Food Security (PISA)** **Responsible entity:** Kreditanstalt für Wiederaufbau (KfW) **Implementing entities:** Ministry of Agriculture **Donors:** KfW **Starting date:** January 2016 **Closing date:** December 2019	The objective of the programme is to contribute to the promotion of productive agriculture and food security in Niger. More specifically, it aims to increase agricultural production, improve the income of family farms, and facilitate access to the market for agricultural products. The main expected results of PISA are, first, the development, rehabilitation, equipment and dev	By promoting small-scale irrigation, the PISA will produce lessons learned that will be useful to the LDCF project. The increased revenues of family farms will also provide a strong basis for investment in further irrigation equipment.	The LDCF project could work with the PISA to advocate for the dissemination of lessons learned and trainings to targeted villages through the training of additional extension services. As both projects are intervening in similar regions (Tahoua et Tillabery), the improved knowledge of extension services can ensure the dissemination of lessons learned from both projects to each other's

	elopment of small-scale irrigation infrastructures and their sub-watersheds; the improvement, storage and conservation of agricultural products, and access to markets; and the sustainability, development and maintenance of rehabilitated areas.		sites.

12. The project will also build on the lessons learned of the following closed project:

Water Resources Mobilization and Development Project (PROMOVARE) - Pilot Program for Climate Resilience (PPCR). Responsible institution: Min. of Planning, Land Use Planning and Community Development (MP / AT) Implementing entity: Directorate of National Meteorology (DMN / Min of Transport) Budget: US D 25 million (US D 15 million loan, US D 10 million grant) Donors: AfDB, IFC Period: Project approval April 2012 / Closing date June 2018	The project will contribute to strengthening the resilience of the population at the level of the targeted communities, through the control of water for agro-pastoral activities. This project will operate in ten communes, namely Abalak, Afala, Agadez, Baleyara, Illelera, Kaou, Loga, Ouallam, Sukututan, and Tabelot.	Relevant activities: (i) Construction and rehabilitation of mini-dams, furrow irrigation systems, and development of irrigated perimeters for the development of an area of 1,023 ha; (ii) watershed protection; and (iii) capacity building of producers to adopt resilient technologies and practices.	The proposed project will capitalize on lessons learnt from the PROMOVARE project, in particular during the design and implementation phases of the IWRM practices and techniques, (Outcome 2). taking into account constraints and opportunities related to the national context

3) Proposed alternative scenario

13. The long-term solution would be to improve the integration of climate change adaptation into sectoral and local water planning and budgeting, building on proven adaptation techniques and practices for Integrated Water Resource Management (IWRM) developed under the project and identified through in-depth studies.

14. This will be achieved by (i) integrating climate change adaptation in relevant water-related budgeting and planning frameworks at national and local levels; (ii) disseminating economically sustainable hybrid village water systems and multipurpose infrastructures; and (iii) establishing evidence-based knowledge to inform policies and investments on adaptation in the water sector. The first and third component will be conducted in close synergy with the NAP GCF support project. In particular, the GCF project will "advance medium and long-term adaptation planning and budgeting in Niger" to compile a NAP and facilitate its implementation, before putting in place mechanisms to ensure appropriate reporting and monitoring.

15. This project is aligned with the following GEF Focal areas:

- CCA-1 Reduce the vulnerability of people, livelihoods, physical assets and natural systems to the adverse effects of climate change. The outcome 2 will support vulnerable populations to access safe and sustainable water resources for their consumption and for agriculture. This outcome will also protect vulnerable people's assets and livelihoods to the increased droughts and floods.
- CCA-2 Strengthen institutional and technical capacities for effective CCA. The outcome 3 will increase the technical knowledge of decision makers at the local and national level in terms of adaptive practices in the water sector by ensuring the diffusion of best practices and lessons learned across the actors.
- CCA-3 Integrate CCA into relevant policies, plans and associated process. Outcome 1 will be responsible for the improvement of planning for adaptation in the water sector.

16. More specifically, the expected results of the projects are:

Component 1: Improving the planning of adaptation in the water sector

Outcome 1: Integrate climate change adaptation in relevant water-related budgeting and planning frameworks at national and local levels

Co-financing amount for Component 1: US$ 2,667,282

LDCF project grant requested for Component 1: US$ 1,370,900

Without LDCF intervention (baseline situation)

17. The country has been developing and adopting several development plans and strategies in various sectors to integrate climate change[3].

18. The 2017-2021 PDES[4] is the unified development framework of the country. The PDES is organized around five major areas that are cultural renaissance, social development and demographic transition, accelerating economic growth, improving governance, peace and security, and sustainable environmental management. Its Priority Action Plan includes a budget line for the promotion of CCA and CCM measures. The PDES dedicates an entire program to improve development management. With regards to budget programming, the PDES is implemented through the Multiannual Budget and Economic Programming Document (DPBEP) and the Multiannual Expenditure Programming Documents (DPPD) of sectoral ministries covering a period of three years. They are updated through the annual macroeconomic and budgetary framework exercises, The PDES orientations reflect the various initiatives taken by the GoN to advance the adaptation agenda.

19. The water sector is key to the development of Niger, as stated in 2017 in the PANGIRE approved on May 9th, 2017[5], which reiterates the importance for the water resources sector to adapt to climate change. It complements the 2010 Water Code[6], the 2005 National Strategy for the Development of Irrigation and Water Harvesting (SNDI/CER), the 2015 Strategy for Small Irrigation[7], or the National Drinking Water Supply and Sanitation Program (PNAEPA). The country also benefits from the support of the UNDP Water Governance Facility @SIWI to provide the Ministry of Water and Sanitation (MH/A) with human, financial and organizational support, following the GEF funded project "Implementing NAPA priority interventions to build resilience and adaptation sectors of the agriculture [8] [9]

sector to climate change in Niger"[9],[9]. By controlling water distribution, preventing droughts and setting up a resilient agricultural sector better prepared for climatic disruptions and providing sufficient food (vegetable crops, but also meat and milk by improving conditions of livestock farmers and their herds) and drinking water for local populations, Niger will benefit from improved economic productivity.

20. The decentralization process of the PANGIRE and its operationalization at the communal level are based on the development of Local Water and Sanitation Plans (PLEA), and the creation of consultation and management bodies: The Water Management Local Committees (CLE).

21. The implementation and monitoring of environmental policies, including climate change policies, are coordinated by the National Council for Environment and Sustainable Development (CNEDD), created in 1996 and placed under the Office of the Prime Minister. It is supported by an Executive (SE/CNEDD) for the day-to-day management. The CNEDD is responsible for coordinating the NAP process. In the water sector, the CNEA is the technical advisory body of the government in the definition, implementation, and monitoring of sectoral policies.

22. The project of community action for climate resilience (PAC/RC), financed by the World Bank from 2012 to 2019, also supports the integration of climate change considerations into planning through the implementation of its first component "integration of climate resilience into development strategies at the national and local level".

23. In addition, the project will directly build on the results of the GCF NAP project, which is planning a range of actions to address the main barriers that hinder CCA mainstreaming into planning in Niger: limited institutional, functional and technical capacity; constrained financial, human and material resources; limited synergies and coordination among climate adaptation initiatives; weak monitoring and evaluation mechanisms; and insufficient data availability, reliability and management. It covers 5 sectors to be identified during the inception phase, and, based on discussions for possible synergies with the LDCF project, will exclude the water sector. Through its ground-setting activities to the NAP process and the strengthening of sectors key to the adaptation of the water sector, this GCF project will therefore provide the basis for an improved understanding of climate change in Niger and planning for adaptation. The project will contribute with grant co-financing of US$ 2,667,282 during the remaining period of the project.

24. However, the institutional analysis undertaken during the PPG[10], shows that the current institutional framework in Niger is not entirely operational, presents several weaknesses (particularly in terms of human resources), lacks coordination, and is unprepared with regards to the mainstreaming of climate change adaptation and mitigation. Despite efforts made thus far by the GoN, the inclusion of climate change into development plans, budgeting, and programs for the water sector at the national and local level remains nascent. In addition, there is a lack of coordination of activities to adequately promote integrated water resources management, in particular for agriculture and rural activities, and to take into consideration adaptation into sectoral budgeting framework.

With LDCF intervention (with adaptation benefits)

25. The intervention will address the main challenges to integrating CCA into water planning and budgeting at national and local levels (taking gender into consideration), as identified in the May 2014 NAP Stocktaking Report and under the framework of the 2012 LEG Technical Guidelines on NAP. Under Component 1, Niger will use LDCF resources to develop effective multi-stakeholder processes to advance NAP in the water sector. It will support the alignment of the NAP with the national priorities and strategic frameworks of the water sector, in alignment with the activities conducted under the GCF NAP project.

26. Following the establishment of the appropriate linkages between the national coordination mechanism and the sectoral mechanism, the project will support the production of information needed to facilitate CCA mainstreaming into the water institutional framework. The most appropriate adaptation options in the water sector will be identified, based on the climate risk and vulnerability assessment and the appraisal of their costs and benefits. It is expected that capacity building activities will enable interactions and synergies among actors, address gaps, and advance the NAP process in the water sector, in synergy with the GCF-financed project.

27. Finally, communication and capitalization of lessons will be supported to maximize the efficiency and the impact of the project. The main implementing agencies will be supported in compiling lessons learnt so as to disseminate and perpetuate the good practices.

28. Component 1 will give women access to trainings and workshops on resilient water resources management practices and benefits. This will reduce the existing gender gap on technologies access and agricultural productivity, through improved access to water for crops, and result in women empowerment and a lightened workload.

Output 1.1: An operational coordination and consultation mechanism is established to ensure ownership by all actors of the process of mainstreaming CC in the water sector

29. An operational coordination and consultation team will be created under the direction of the MH/A to jointly identify and prioritize adaptation needs in the water sector and coordinate the monitoring of water management activities. The team will also coordinate the implementation of the communication and raising awareness program on Integrated Water Resources Management (IWRM) (output 1.2), climate change risks for water resources (output 2.1) and the online community platform (output 3.3). This operational team will work in close collaboration with the NAP coordination mechanism led by the CNEDD and established under the GCF NAP support project, as well as with the CNEA.

30. The team will update the NAP sectoral road map, including sequencing of various stages and draft a monitoring and evaluation plan for the process. This sectoral road map is drawn from the overall NAP roadmap adopted at the national level under the GCF support project.

31. An updated gap and need analysis will also be conducted in order to identify constraints and required measures to create an enabling environment for integrated water resources management in a context of climate change and variability. The analysis will identify: a) the strengths and weaknesses in the capabilities, data, information and resources needed to contribute effectively to the water management process, and b) potential barriers to the planning, design and implementation of IWRM practices.

32. This output will also build on the priorities and recommendations elaborated from the national database set up under output 3.2. Urgent needs and targeted groups will be refined and made more precise in order to respond to the needs of the water sector in terms of CCA. Eventually, the workshops at national and local levels and the compilation of the revised sectoral and subnational priorities, will conduct to the elaboration of the draft of the water sector NAP. The draft will define the NAP framework and strategy for the water sector, which will complement the already existing NAP process implemented through the GCF-financed project.

Activity 1.1.1. Set up and run an operational coordination team for the water sector that will steer the revision of the institutional framework and pave the way for the sectoral NAP.

Activity 1.1.2. Draft a roadmap to advance the NAP process in the water sector.

Activity 1.1.3. Conduct an analysis of the gap and need for the creation of an institutional enabling environment for adaptation through IWRM.

Activity 1.1.4. Conduct multi-stakeholder consultation workshops at national and local levels to identify and appraise on-going water-related climate change adaptation options.

Output 1.2: National, subnational and local stakeholders understand CCA practices related to sustainable water resources management

33. Several partnerships will be created with national institutions (including the Ministry of Water and Sanitation) and regional organizations (Niger Basin Authority (NBA)) that have mandates relating to the water sector and water resource management. Partnerships will be further extended to the GCF-financed NAP project and the Climate Information and Pro-spective Development Project (PDIPC) initiative for a joint design and implementation of training packages. In particular, the PDIPC will improve the quality of climate information and products and improve climate modeling, prediction, and information dissemination, to make it easily understandable for key farmers and pastoralists. These trainings will support the integration of CCA in planning tools, cost-benefit analysis for the water sector, innovative and climate-smart techniques for IWRM, flood modeling, and costing and integrating CCA budgets into national and subnational budgets. Three training modules will be prepared for ministries' staff on (i) the current climate variability and future climate projections, and the trends in terms of pressures on the water resources; (ii) the water market, with the current and future water use correlated with socio-economic developments; and (iii) guidance on the climate-smart use of water resources.

34. These series of training sessions will be organized under the partnerships established with both projects (DPIPC and NAP GCF) with national institutions (Ministry of Water and Sanitation, DGRE, ENAM, University of Niamey, Geography Department, EMIG, etc.) and regional organizations (NBA, AGRHYMET, CILSS, ACMAD). About 250 experts, national, subnational and local decision-makers will be trained as a result of this output.

35. These partnerships with national and regional institutions will also support public awareness and outreach programmes and facilitate the communication, education and public access to information on climate change adaptation. Campaigns of information and sensitization about CCA and water resources management will be launched. These campaigns will focus on groups at risk in the water sector and estimate their needs. The consultation will target vulnerable groups such as women, children, the elderly, pastoralists, farmers, etc. It will also raise awareness on best practices. This will take the form of one-month information campaigns via the radio, information gathering in villages, the dissemination of leaflets, etc.

36. Strong coordination will be established with the outcome 3, in particular, the lessons learned collected, analysed and managed will provide critical resources to support national, subnational and local stakeholders to have an adequate understanding of CCA practices related to sustainable water resources management.

Activity 1.2.1. Forge partnerships with national institutions (ie. National Commission for Water and Sanitation) and regional organizations (NBA) that have mandates relating to the water sector and water resource management.

Activity 1.2.2. Prepare training modules for ministries' staff and train key stakeholders.

Activity 1.2.3. Develop public awareness and outreach programmes to facilitate the communication, education and public access to information on climate change adaptation in the water sector.

Output 1.3: Data collection/production, information and communication mechanisms, are in place for the water-sector NAP

37. Under Output 1.3, decision-makers will be sensitized on efficient CCA practices in the water sector and on the benefits of data exchange. As such, permanent institutional links and data exchange protocols are necessary to allow participants to be more efficient and ensure the alignment and compatibility of various databases and monitoring systems.

38. These links and protocols will be ensured through the harmonization and standardization of indicators, data processing, modeling, projections, vulnerability assessments, GIS related to CCA practices in the water sector. This harmonization and standardization process will be conducted in close consultations with the NAP-GCF project, to ensure a strong alignment across the different sectors. A review of the legal, institutional and regulatory frameworks will also be conducted to identify the gaps and inconsistencies in directing adaptation investment in the water sector. This review will support the achievement of the output 1.4 by providing guidance on the needs for increased integration of CCA into these existing frameworks This output will also support the assessment of climate vulnerability for targeted communes on the basis of current climate variability and future climate projections, current and future land and water resource use and socio-economic development.

39. Then, information and communication mechanisms for CCA practices will be shared via workshops to enhance public access to knowledge on existing adaptive mechanisms and success stories in preventing climate-related hazards in the water sector.

40. They will also inform the climate information and knowledge management strategy expected to be formulated under the GCF NAP support project. This strategy will serve to strengthen the information collection, production and dissemination mechanisms for iterative updating of climate-relevant knowledge. Data will be organized to facilitate communication on CCA practices between all the key stakeholders as well as the population, and to draw lessons from CCA activities and implement and replicate good CCA practices. This will lead to a systematic integration of these good practices into the national policies and strategic frameworks in the water sector under Output 1.1 as well as allow adequate cooperation and complementarity with the NAP process. This output will also encourage dialogues through the annual publication of reports and the establishment of fora for dialogue between communities and the MH/A, to broaden perspectives and visions and to promote the resolution of possible water conflicts.

Activity 1.3.1. Establish permanent institutional links and data exchange protocols between key stakeholders.

Activity 1.3.2. Harmonize/standardize indicators, data processing, modeling, projections, vulnerability assessments, GIS for CCA practices in the water sector, in line with the GCF NAP.

Activity 1.3.3. Review the legal, institutional and regulatory frameworks.

Activity 1.3.4. Assess climate vulnerability and identify coping measures for targeted communes

Activity 1.3.5. Organize workshops to enhance public access to knowledge on existing adaptive mechanisms and success stories in preventing climate-related hazards related to water sector.

Activity 1.3.5. Publish annual reports and establish fora for dialogue between communities and the MH/A.

Output 1.4: CCA is integrated in relevant planning and budgeting frameworks in the water sector

41. Under Output 1.4, CCA will be integrated in relevant planning and budgeting frameworks in order to improve water resources management in the context of climate change. A complementary support is provided by the GCF NAP project for additional sectors, through (i) the review and revision of existing integration guidelines for the local development plans (PDC), and sectoral policies and strategies, and (ii) the adoption of budget tagging and tracking tools for climate finance and assisting sector budget and planning departments to apply tagging tools.

42. This output will support the identification of climate adaptation options for the water sector through the conduct of cost-benefit analysis, building on coping measures identified in activity 1.3.4. This will guide the decision-making process for the NAP elaboration and create a momentum between all stakeholders by exchanging experience and information.

43. The output will also support the development of pluri-annual programmatic and budgeting climate sensitive approaches for the water sector, and the set up of climate budget code for climate budget tagging in order to track climate expenditures and climate budgeting. These budget codes will be harmonized with the different climate indicators and financial climate markers across key sectors developed under the GCF NAP in order to enable the setting up of a national climate budget and future investment lines at the national level. These approaches will be developed through the compilation of priorities in the water sector, the organization of stakeholders' consultations, the integration of comments and the validation and dissemination of a NAP for the water sector. In addition, to enable climate budgeting global comparison, this output will build on the practices applied for existing Climate Public Expenditures and Institutional Review (CPEIRs).[11] This will support the development of a coherent vision for external and national climate investments to put together a water regulatory framework to better integrate CCA in IWRM.

Activity 1.4.1. Conduct studies to assess the costs and benefits of innovative and/or adaptive measures and techniques in the water sector.

Activity 1.4.2. Develop pluri-annual programmatic and budgeting climate sensitive approaches and set up climate budget codes.

Activity 1.4.3 Put together a detailed and coherent water legal, institutional and regulatory framework to better integrate CCA in water resources management.

Component 2: Developping field-tested knowledge for IWRM

Outcome 2: Disseminate economically sustainable hybrid village water systems and multipurpose infrastructures

Co-financing amount for Outcome 2: US$ 25,400,000

LDCF project grant requested for Outcome 2: US$ 6,052,053

Without LDCF intervention (baseline situation)

44. Due to the lack of facilities, resources, and capacities, farmers and breeders continue to rely on non-resilient and poor water infrastructures and techniques. Under the baseline scenario, rural communities endure important yield losses due to severe climate events such as floods, droughts, and erratic rainfall patterns that are becoming increasingly frequent.

45. However, four on-going projects are supporting communities in improving their access to water and provide decision-makers with field-tested opportunities for investment in water infrastructures.

46. The project for the implementation of the PANGIRE, under its outcome 2 "mobilize and enhance natural water resources and develop socioeconomic activities", will install hydraulic infrastructures for drinking water access, sanitation, agriculture or livestock.

47. The second phase of the Integrated Programme for De-velopment and Adaptation to Climate Change (PIDACC) will promote the sustainable use of natural resources in the Niger Basin to ensure the protection of existing water resources and their ecosystems, supporting an ecosystem-based adaptation. Through the provision of important lessons learned, it is expected that the project will provide US$24,300,000 in in-kind co-financing.

48. In addition, the second phase of the support programme for the water and sanitation sector (PHRASEHA II), financed by the Swiss Cooperation and implemented by the MHA, will also support the project by providing lessons learned in the implementation of its project interventions under its second component which aims at giving access to equitable and affordable access to water resources for drinking and sanitation and hygiene for rural populations.

49. Finally, the second phase of the project "water for growth and poverty reduction in the Mekrou sub-basin in Niger" will also provide lessons learned and additional infrastructures that will support the outcome 2 of the LDCF project. This project is implemented by the Ministry of Hydraulics and Sanitation and the permanent secretariat of the PANGIRE (SP/PANGIRE), through the Global Water Partnership for West Africa (GWP-AO). This project will provide US$ 1,100,000 of in-kind co-financing.

50. Even though these projects are supporting an improved access to water for rural populations, they fail to introduce climate change adaptation concerns, and may have a limited impact in the long term.

51. A detailed and participatory analysis of climate risks and hazards has been undertaken at the village level in seven municipalities during the PPG phase (see table 1). The study shows that all seven municipalities suffer heavily from climate change induced by the alteration in rainfall patterns. Without the GEF intervention, this situation will persist, with no additional support to mitigate the climate-related impacts on their living conditions.

With LDCF intervention

52. Under the alternative scenario, communities will become more resilient to erratic rainfall patterns. Land erosion and flood management planning as well as more efficient water supply and irrigation technologies will help sustain water and food supplies. This outcome will offer a specific opportunity to ensure the provision of CCA water services at the local level. The resources provided by the LDCF will help promote the widespread diffusion of economically viable hybrid water supply systems and multipurpose infrastructures that, in addition to providing health benefits to beneficiary households, will make access to water an opportunity for income generation. The preparedness of the vulnerable communities to climate related extreme events will be strengthened and municipalities will implement flooding risk prevention plans drafted under the Component 1. Most vulnerable communities, as identified in the NAPA, are targeted, namely Tenhiya in the department of Zinder, Kaou, Takanamat, Tchintabaraden and Tabalak in the department of Tahoua, and Ouallam and Tondikiwindi, in the department of Tillabery.

53. The Component 2 will also give women access to a dedicated training to ensure the maintenance of the hybrid and irrigation systems. This will reduce the existing gender gap in accessing technology and agricultural productivity and result in women empowerment and a lightened workload. Moreover, by supporting the development of climate-resilient water systems, the impacts of droughts on agricultural yields and water scarcity will significantly be reduced. This will therefore reduce the travel distance of women's often dangerous daily journeys, to fetch water and the threats of food insecurity caused by crop losses. As a result, women will have more time available for other activities, whether it is income-generating activities or participation in the citizen life of their village and education.

54. The beneficiary communes for each infrastructure were selected following a SWOT analysis, informed by the information collected during the PPG. This identified the context for each commune and which infrastructure would yield the highest impact. A detailed table summarizing the infrastructures and the results of the SWOT analysis is available in Annex K. The villages will be selected during the implementation of the project, in consultation with the local councils for each commune, based on the vulnerability and relevance of the intervention.

55. Following the sensitization activities in the Component 1, the field testing of economically sustainable hybrid village water system and multipurpose infrastructure for efficient water management systems will be conducted. It will enable the creation of an economy around water resources in remote villages and provide useful lessons for upscaling successful practices.

Output 2.1: Hybrid household water supply solutions and smallholder irrigation systems are promoted and adopted in vulnerable communities

56. Under the Output 2.1, 5 villages in the communes of Tenhiya (2), Tchintabaraden (1) and Kao (2) will be provided with one gravity tank of 15,000 liters, equipped with two distinct pipes for distribution of drinking water and for irrigated agriculture. The gravity tanks will be fed through the drilling of a borehole and the installation of a solar water pump, complemented by a generator to provide energy when needed (at night or if the weather conditions are not sufficient for solar energy generation).

57. More specifically, the first pipe will provide twelve standpipes serving 10 families each, with drinking water. The benefiting households will also be provided with water storage and treatment systems. The second pipe will distribute water to 80 small farming perimeters of 500m² for micro irrigation for agriculture. In total it is expected that, across the 5 villages, 5,600 people will benefit from these infrastructures. A detailed feasibility study for the design and procurement of the hybrid systems and irrigation systems will be conducted, taking into account the sustainability of these systems, including after the end of the project. To avoid vandalism around the groundwater supply systems, electrified fences will be installed.

58. A detailed feasibility study will carefully assess the sustainability of these drillings to avoid over exploitation of water table resources in the seven villages for both outputs 2.1 and 2.2. Long-term sustainability of the exploitation will be critical for the success of the project, and will depend on factors such as density of wells, depth and transmissivity of the producing horizon(s), vulnerability to contamination from human activities (pesticides, fertilizers, waste disposal etc.), abstraction rates etc. This feasibility study will include (i) a preliminary assessment collating from existing hydrogeological national and other international database of published maps, to identify high suitable/potential areas (make technical and socio-economic base case), (ii) a socio-economic analysis to further measure the viability of implementation (total cost), indirect benefits (ecosystem), indirect costs (opportunity cost of water) and other macro-scale aspects (local heterogeneity, synergies/trade-offs), (iii) a land-use/land cover map, land transitions (iv) the identification of the type of aquifer, hydraulic connections, aquifer productivity and the adequacy of water supply, (v) an assessment on the impact on other water uses and nearby groundwater users, and if relevant (vi) hydro geochemical analysis, irrigation water quality parameter (ie. SAR) to measure the suitability of water for irrigation and understand the mechanisms that may affect groundwater for irrigation.

59. The International Hydrological Programme (IHP) of UNESCO has extensively worked on assessing water resources in the region of the Iullemeden Aquifer, where the project will be implemented, and it was instrumental in the preparation and execution in cooperation with the OSS of the GEF medium-size project “Managing Hydrogeological Risk in the Iullemeden Aquifer System” (2004-2007). A significant amount of data and experience is available within UNESCO, calling for the establishment of a partnership for supporting the feasibility study process. UNESCO/IHP supports member states in developing institutional and human capacities for water resources management and governance at local, national and regional levels. The IHP can contribute to the achievement of the outcomes of the project in particular strengthening the capacity of national institutions and communities through trainings on the management of groundwater resources for climate change adaptation measures and to inform adaptation policies.

60. Similarly, the UN-International Groundwater Resources Assessment Centre (IGRAC), working under the auspices of UNESCO and WMO, has extensive experience in studying groundwater and, as a close partner to UNESCO/IHP, could also support the feasibility studies for the drillings under outcome 2 (both output 2.1 and 2.2).

61. Both agencies would work with national partners to use the knowledge available at the local level and build the capacities for in-depth groundwater assessment of these stakeholders. During the project implementation, the project team will explore possibilities to involve these agencies to ensure resources can be used efficiently, and the knowledge within these agencies can be built upon.

62. Groundwater resources can be vulnerable to climate change because of 1) inadequate legislation, regulations, and national water policies that provide no clear priorities or directions to responsible government agencies, and 2) limited financial means and personnel to sustainably manage groundwater resources and water supply systems. In this context, improved national and local capacity on groundwater resources governance (including but not limited to the use and prioritization of IWRM and conjunctive management) can contribute to setting up adequate adaptation policies.

63. In addition, water user committee will be established in each community to ensure the maintenance of the gravity tanks and will be ultimately responsible for the operation and the regular collection of royalties from users of drinking water and water for irrigation. Before and during the construction of the water infrastructures (both for output 2.1 and 2.2), the committee will discuss the need to finance a guard for the infrastructures to prevent vandalism if the fences are not considered sufficient. At least 50% of the committee members will be women. These water user committees will receive technical support and will be trained to develop sustainable plans for maintaining hybrid systems during and beyond the project lifetime. The members of the committees will also benefit from trainings in maintenance, management, irrigation and agronomy, including for the activities conducted under output 2.2. Better water access will generate a new economic dynamic in the communes as the use of sustainable methods will increase agricultural productivity and give jobs to young people and women. It will also reduce the pressure on water resources between agriculture and livestock.

64. Considering the high risks associated with these infrastructures, the Social and Environmental Planning Procedure (SESP) conducted during the project formulation, identified the need for the conduct of an Environmental and Social Impact Assessment (ESIA) and an Environmental and Social Management Plan (ESMP). The ESIA and ESMP will provide assurance that the project activities do not have a negative impact, and will issue requirements to mitigate identified risks. These will cover the entire project, but given the higher risks involved with the implementation of Outcome 2, the ESMP is likely to have a stronger focus on this outcome. The ESIA and ESMP will be conducted in parrallel with the feasibility study conducted under the activity 2.1.1. and will be complementary.

Activity 2.1.1. Conduct a feasibility study for the installation of sustainable hybrid systems and irrigation systems.

Activity 2.1.2. Install hybrid systems in 5 villages, including irrigation systems.

Activity 2.1.3. Establish an effective water users' committee in each village.

Activity 2.1.4. Train instructors of the associations’ village councils to form young people and women to maintain the hybrid water systems.

Activity 2.1.5. Conduct an ESMP and ESIA

Output 2.2: Multi-purpose infrastructures in sensitive ponds and koris to protect equipment and agricultural land from erosion and flooding are installed

65. In areas subject to water-related challenges, the project will install water supply, irrigation and flood protection infrastructures and systems around sensitive ponds, koris and shallow waters, and restore surrounding degraded areas to enhance their protective and productive functions. A cost benefit analysis will evaluate the different options for the development of multi-purpose infrastructures and their environmental and social impacts. For water supply, irrigation and flood and erosion protection, the following interventions will be conducted:

- The drilling of 50 boreholes for small garden perimeters, around ponds, with easily accessible groundwater resources, equipped with solar pumps and a linear pipeline distribution system, including californian irrigation systems[12], drainage systems and drip irrigation systems. This will cover 12,5 hectares.

- In areas vulnerable to floods and erosion,
  - 10 kilometers of eroded riverbanks will be restored and protected through reforestation,
  - 1,000 hectares of glacis[13] will be restored and protected through reforestation,
  - 300 hectares of wooded areas will be regenerated/afforested and 380 hectares of grazing areas will be protected through half-moon formation, bank formation and planting of seedling.
  - 2 spreading thresholds will be installed

66. The analysis will also identify opportunities for micro, small and medium-size enterprises (MSMEs), but also public-private partnership opportunities and financing strategies. The best environmental options will be analyzed in order to identify, design and build infrastructures that combine the restoration of ecosystem functions with the provision of sustainable services (especially for CCA and climate-related disasters prevention).

67. With these installations, trainings will be set up to guarantee the success of the activities and enable operation and maintenance of the facilities by the population. The trainings will cover, among other things, watercourse protection techniques, infrastructure maintenance, and socio-environmental monitoring. Additional productivity gains are expected through these land-use measures providing higher revenues, some of which will be set aside for the operation and maintenance led by the committees. The principle of mobilizing funds to ensure the functioning of the water user committees will be integrated into the protocols established with these structures. With these activities, water access will be easier for the agriculture as it will prevent from the silting of ponds, koris claw, erosion and floods which are threatening the productivity. The water user's groups established and trained under output 2.1 will also be responsible for the maintenance and the management of the infrastructures to ensure their sustainability.

Activity 2.2.1. Conduct a cost-benefit analysis to evaluate different options for the development of multi-purpose water facilities.

Activity 2.2.2. Construct or rehabilitate multifunctional infrastructures and irrigation systems at sensitive ponds, *koris* and shallow waters in the targeted areas.

Activity 2.2.3. Organize advocacy workshops and undertake knowledge sharing activities to educate the population on disaster risk management (related to floods and droughts).

Component 3: Fostering evidence-based water policy decisions

Outcome 3: Establish evidence-based knowledge to inform policies and investments on adaptation in the water sector

Co-financing amount for Outcome 3: US$ 3,300,000

LDCF project grant requested for Outcome 3: US$ 977,297

Without LDCF intervention (baseline situation)

68. In December 2012, the SE/CNEDD set up a coordination framework for integrating the climate change into Niger's policy planning. However, the provision of scientific information is weakly institutionalized to support evidence-based policymaking. The use of knowledge on adaptation in development policy dialogues and decision-making remains limited due to many obstacles and barriers. This can be explained by several reasons such as policymakers' low level of scientific understanding, a limited interest or knowledge of policy makers in climate change challenges, the limited dissemination of research results, a lack of incentives to use information on adaptation in development policy making, and the lack of institutional channels for mainstreaming adaptation information into policies.

69. However, some lessons learned can be capitalized as part of the NAP process. This is the case of the project for the Improvement of Food Security and Farmer's initiative valorization in the High Social and Environmental Risks Areas of Niger (ZARESE II), that has the objective to contribute to the restauration of production systems to improve the living conditions of climate change vulnerable population and reduce migrations. This will be achieved with the introduction of improved agricultural practices, in particular better water systems and management. Out of the total budget of US$ 3,767,726 financed by the AICS, the Niger Government and the beneficiaries, US$3,300,000 is proposed as in-kind co-financing.

70. Under the baseline scenario, integrating science and better assessing the impacts of climate change will be difficult to achieve. The absence of an efficient monitoring and evaluation (M&E) framework will impede scientific knowledge to be effectively shared with policymakers in a timely and appropriate manner. Also, no evidence-based knowledge system will be put in place to guide adaptation policies and investments. This will result in a perception of high investment risk for CCA practices and infrastructures in the water sector, leading to a disinterest from the private sector.

71.

With LDCF intervention

72. Under the alternative scenario, the data collected under the output 1.3 will facilitate access to a range of information showing the needs of local communities in terms of adaptation to climate change. The data will inform decision-makers on a series of socio-economic benefits of these adaptation strategies, such as improved access to health and education. The visual representation and accessibility of this data can help to engage policy-makers, the private sector, and the international community in a vital step towards developing adaptation policy that will reduce the vulnerability of local communities.

73. Gender issues will be considered within all the decision-making processes of Component 3, thus ensuring a participation and consideration of women within the community platform and monitoring plans. This will include integrating women's perspectives and making use of their specific knowledge of adaptation, as well as local survival strategies.

74. Furthermore, in parallel, the LDCF interventions will be aligned with the GCF NAP project following activities: (i) 1.2: Identifying available information on climate change impacts, vulnerability and adaptation, and assess gaps, (ii) 4.1: Enhancing capacity to monitor the NAP process and adaptation progress; Conduct outreach on the NAP process and report on progress and effectiveness and, (iii) 5.3: Conduct studies or research programmes to estimate future investments in adaptation in all sectors.

Output 3.1: Tailored information services and products on water are set up to respond to the private sector and decision-makers audience needs

75. Key messages will be developed, taking into account the audience needs, operating language, objectives, timeframe, contacts and media of communication. Regular dialogues will be organized to promote greater interactions, discussions and deliberations between researchers, private sector, policy-makers and the general public on adaptation responses offered by IWRM practices. These dialogues will be organized in the framework of the overall NAP process, in liaison with the GCF NAP support initiative, and under the leadership of the CNEDD and the CNEA. They will build on the results of IWRM adaptation practices identified and developed under outcomes 1 and 2, and the strategy to leverage private sector finance to be elaborated by the GCF NAP support project. Policy briefs will be generated from the findings and shared with policy makers and private actors through different platforms including local, national and regional policy dialogues. These dialogues will also be useful to foster engagement of key stakeholders in climate change adaptation in the water sector.

76. This output will support the definition of new and updated climate change adaptation engagements and priorities of Niger at the international level to support the preparation of international negotiations and define Niger's positions on climate change. These discussions and the identification of national priorities will provide an up-to-date framework of investment for future climate change adaptation projects and programmes that will address most urgent needs in the water sector. This will be identified through extensive consultations at the national and local level and translated into policy briefs and the Niger Position Paper on climate negotiations for the water sector.

Activity 3.1.1. Organize regular dialogues for a better coordination and interaction on IWRM adaptation responses with the several stakeholders: private sector, policy-makers, researchers, civil society and universities.

Activity 3.1.2. Issue policy briefs from the findings, to be shared during several meetings with policy makers and private sector actors at local, regional and national levels.

Activity 3.1.3. Organize consultations workshops to discuss and deliberate about the future general plan for Niger in terms of climate negotiations for the water sector.

Activity 3.1.4. Support the drafting and validation of the Niger Position Paper on climate negotiations, taking into considerations findings from IWRM adaptation responses.

Output 3.2: Knowledge management and M&E systems are established in the water sector

77. A NAP M&E system is expected to be established by the GCF NAP support project and the PARC /DAD project, following a mapping of existing monitoring and evaluation systems. The project will contribute to set up the NAP monitoring and evaluation (M&E) system for the water sector. It will be completed and handed over to the SE/CNEDD which host the NAP M&E system and will serve as a learning tool for generating evidence-based data and information to inform policy making and future planning processes in the water sector. This will include the development of standard indicators and a detailed framework for a

consistent monitoring of climate change impacts on key environmental and socio-economic aspects. This will ensure the effective and reliable observation of changes on CC causes and impacts. Based on the climate change impacts identified under the monitoring plan in activity 3.2.1, and the data managed and stored in the online community platform under output 3.3, adaptation priorities will be continuously identified and defined in the water sector. Each adaptation priority will be associated to standardized climate indicators that will enable the formulation of measurement methods to consistently assess the performance of investments (including the benefits they will have on a number of socio-economic factors, ie. increased revenues, improved health, increased access to education), to monitor progress on CCA/CBA against the baseline situation, and to update national adaptation plans. This will enable a continuous update of the community platform with the provision of lessons learned and best practices and the use of standardized advocacy tools, products, and methods to publish information on costs and impacts of climate change, but also reports on progress and effectiveness of CCA practices.

78. The monitoring plans, advocacy tools, products and methods of measuring costs and impacts of climate change will be designed during the first meetings, jointly with the GCF NAP project and all the stakeholders. It will also be necessary to set up an evaluation framework to assess whether interventions are efficient or not and adapt them if necessary. This framework will be important for extracting the success stories and lessons relevant to the plannings processes: NAP and PDES. In addition, a methodology could be developed for evaluating possible investment options for adaptation in the water sector using information from project experiences. To conduct this evaluation, the impact evaluation framework established under the activity 3.2.2 could be used. This methodology could be extended to other sectors covered by the GCF NAP project.

Activity 3.2.1. Develop monitoring plans to measure CCA causality and impacts on the water sector.

Activity 3.2.2. Develop a process to continuously define adaptation priorities in the water sector based on the identified climate change impacts and set up an impact evaluation framework to assess the efficiency of the interventions.

Activity 3.2.3. Set up standardized definitions and measurement methods for climate indicators on water to consistently assess the performance of investments in the water sector, to monitor progress on CCA/CBA against the baseline situation, and to update water-related national adaptation plans

Activity 3.2.4. Develop advocacy tools, products and methods to publish costs and impact information and reporting on progress and effectiveness of adaptation actions taken in the water sector.

Output 3.3: An online community platform is implemented

79. An online community platform will be set up to foster partnerships between local authorities and beneficiaries, to enable them to assess progress made, and support the scaling up of local experiences, through the availability of options impact assessments and appraisal. Under this project, such partnerships will be extended to research institutions intervening in the water sector, including local and international research centers, in order to support the performance and impact assessments in the intervention sites, using the impact evaluation framework established under the output 3.2.

80. It is expected that the SE/CNEDD, coordinating this platform, will facilitate its expension to other vulnerable sector, therefore paving the way for the NAP process, and the sectoral NAPs. Adequate trainings will be designed and provided to the partners to efficiently perform reviews and identify options and opportunities for scaling-up. This platform, by receiving inputs from stakeholders on innovative climate change adaptation approaches and practices for sustainable water management, as well as thorough reviews of these options, will be an open source database between all the actors to reinforce the multilateral communication and provide up to date information for the widespread upscaling of successful adaptation practices, including by building on the activities conducted under the Outcome 2.

81. This platform will also be informed by the platform developed under the PDIPC for sharing and analyzing meteorological information. For instance, by sharing information and gathering knowledge, it will highlight success factors of local experience in PDCs and Local Water and Sanitation Plans (PLEA). Based on the assessment of the potential, opportunities and lessons learned from intervention sites and project investments, including from the private sector, this output will also support the development of a strategy for the scaling up of succesful initiatives. These lessons learned will feed into the strengthening of the institutional framework, supported under the Outcome 2. This will require to implement the following activities:

Activity 3.3.1. Set up and on-line community platform.

Activity 3.3.2. Set up a training program for users to review adaptation options and identify opportunities for scaling-up.

Activity 3.3.2. Facilitate consideration of success factors of local experience in PDCs and PLEAs by using the M&E framework established under the output 3.2.

Activity 3.3.3. Develop a scaling-up strategy for successful initiatives.

4) Incremental/additional cost reasoning and expected contributions from the baseline, the LDCF and co-financing

Baseline

82. The Government has initiated steps for the integration of climate change adaptation into planning, including in the water sector and there is an increased understanding of the challenges climate change is posing on the development of the country. However, very limited resources were already allocated to finance interventions.

83. In addition, a large range of initiatives, mainly financed by international donors and implemented by national institutions, including the SE/CNEDD, are being implemented and are generating a critical database of experience and lessons learned. However, these lessons fail to be capitalized and centrally recorded to inform future investments.

Co-financing

- The second phase of the Integrated Programme for Development and Adaptation to Climate Change (PIDACC) will promote the sustainable use of natural resources in the Niger Basin to ensure the protection of existing water resources and their ecosystems, supporting an ecosystem-based adaptation. Through the provision of important lessons learned, it is expected that the project will provide US$24,300,000 in in-kind co-financing.
- The project for the Improvement of Food Security and Farmer's initiative valorization in the High Social and Environmental Risks Areas of Niger (ZARESE II), with the objective to contribute to the restauration of production systems to improve the living conditions of climate change vulnerable population and reduce migrations, will support the project. In particular, the project will introduce improved agricultural practices, including better water systems and management, this will produce important lessons learned for the LDCF NAP project. Out of the total budget of US$ 3,767,726 financed by the AICS, the Niger Government and the beneficiaries, US$3,300,000 is proposed as in-kind co-financing.
- The second phase of the project "water for growth and poverty reduction in the Mekrou sub-basin in Niger" will also provide lessons learned and additional infrastructures that will support the outcome 2 of the LDCF project. This project is implemented by the Ministry of Hydraulics and Sanitation and the permanent secretariat of the PANGIRE (SP/PANGIRE), through the Global Water Partnership for West Africa (GWP-AO). This project will provide US$ 1,100,000 of in-kind co-financing.

· Furthermore, the LDCF interventions will be strongly aligned with the GCF NAP project, implemented by the SE/CNEDD, specifically the following activities: (i) 1.2: Identifying available information on climate change impacts, vulnerability and adaptation, and assess gaps, (ii) 4.1: Enhancing capacity to monitor the NAP process and adaptation progress; Conduct outreach on the NAP process and report on progress and effectiveness and, (iii) 5.3: Conduct studies or research programmes to estimate future investments in adaptation in all sectors. This project will be implemented in close coordination with the LDCF project, including through staff cost-sharing, and will participate to the project by contributing US$ 2,667,282 in co-financing.

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5) Global adaptation benefits

84. The project will provide significant adaptation benefits by reducing the vulnerability of rural communities to the climate induced water stress in Niger. The targeted population are selected based on their access to water resources and its vulnerability to climate change. By providing sustainable water resources for drinking and farming, the project will increase the adaptation for the beneficiaries. In addition, the project will also strengthen the resilience to climate-induced events, such as drought and flood, which are increasingly occuring in Niger as an effect of climate change.

85. The project will also help systematically collect and record lessons learned and knowledge on adaptation practices in the water sector for improved and increased investments by local and national actors. This will be translated in the formulation of a comprehensive NAP framework for the water sector.

86. Finally, the project will have a broader adaptation impact by setting up an on-line platform that will serve as a sharing interface between the different adaptation actors. Under this project, it will be fed with water-sector related knowledge, but, through the partnerships and other sensitization activities, it is expected that other sector will be incentivized to make use of the platform.

6) Innovativeness, sustainability and potential for scaling up

87. The project has been designed to have a sustainable impact at the local and national level. The project addresses the key national development priorities and benefits from a strong institutional support, ensuring its sustainability. The strong commitment from all stakeholders at every level – from Ministries to the communes and villages – will enable the good implementation and execution of project activities and the integration of adaptation in Niger's long-term policy, plans, and national budgets. As local interventions are guided by local needs and demand, sustainability will be ensured, and adaptive capacities will be built up and enforced.

88. The integrated approach adopted for the project design also supports its sustainability. Measures taken to reduce vulnerability to the adverse effects of climate change and those aimed at increasing the ability to introduce adaptive practices for improved livelihoods in the face of climate change, are mutually reinforcing.

89. The establishment of Water Users Committees, represented by women, herders, and farmers is a highly innovative action in Niger, where local communities are empowered to increase their resilience in the long-term and scale-up the interventions through sustainable fee-collection schemes. Another innovative measure of the LDCF intervention is the empowerment of rural communities to better adopt ecosystem based interventions to reduce their vulnerability to extreme climate events and hazards. Communities and local entrepreneurs will contribute to the project, not only by investing their time and facilities but also providing their knowledge and labor. The participative approach and the empowerment of grassroot beneficiaries, in addition to state authorities and Niger's research institutes and universities, is also a guarantee for the long-term sustainability of the intervention.

90. The adoption of new plans, no-regret interventions and policies for the water sector at the national and local levels, together with the increased understanding of climate change and its impacts from Niger authorities, are all supporting the sustainability of the proposed initiative.

91. Institutional capacity enhancement and technical support will facilitate the scaling up of the project by enabling relevant ministries to comprehensively and iteratively assess development needs and climate vulnerabilities, and ultimately to integrate climate change adaptation into national and subnational development and sectorial planning. In addition, the training of Trainers' Approach will contribute to the sustainability and scaling-up of the project by ensuring that capabilities remain and can continue to be strengthened after the end of the project.

92. Finally, the third component of the project aims at developing an evidence-based knowledge system to inform adaptation policies and investments. This in turn will consolidate project results beyond implementation time.

Cost-effectiveness

80. This proposed project is cost-effective as it is expected to produce satisfactory results at a reasonable cost. It will be based on already existing structures and initiatives in Niger. During the preparation phase, the following cost-effective measures were identified for the project:

a. implementing a participatory, integrated approach to climate change adaptation at the community level;

b. conducting a range of training workshops, seminars, and awareness-raising activities for stakeholders;

c. building on already existing capacity building initiatives.

81. These measures were identified as no-regret[14], tangible and cost-effective as they: prioritize the needs of local communities in the project design; optimize the spending of project funds on meeting the needs of the local communities; and ensure that the project is well understood by beneficiaries to promote project success, ownership, and efficient use of finances.

82. For instance, while the PROMOVARE builds capacities of women in facility management and producer cooperatives for soil improvement techniques and rural infrastructure improvements, all the lessons learned will benefit and feed into the proposed project to ensure the best practices are adopted. It will also be integrated into existing planning processes and budgeting to maximize efficiency. This project is also made to complement the NAP GCF project in order to maximize its utility.

83. In addition, the proposed project includes technical training for local communities on implementing, maintaining and monitoring project interventions. A “training the trainers” approach will be adopted whereby extension agents will undergo technical capacity building. This is a cost-effective approach as it reduces the number of beneficiaries that will undergo direct training but will also enable the project to reach a wider audience as the trainers themselves will further disseminate climate change concepts amongst local communities. The training of local communities in conjunction with the adoption of a participatory “learning by doing” approach will further promote sustainability and the scaling-up of the interventions beyond the lifespan of the project.

84. According to the first estimations, the water infrastructures will have a payout over 3-5 years before becoming positive investments for the population. After the first mission in the targeted communes, a first table was drawn to establish the estimated costs according to the quantity and the type of water infrastructures[15]. Water infrastructures investments will include the construction of a miniature dam, the construction of an irrigation system with total water control for an area of 100 ha downstream of the mini-dam, the development and the equipment of 105 ha of irrigated areas through the rehabilitation/drilling of 10 water points, and the supply of 100 drip irrigation kits, 20 water pumps, and 1,000 linear meters of metal fencing.

93. The project formulation team also identified possible alternatives that were considered less cost-effective. The alternatives included:

Implementation in other project sites

85. The targeted population is already aware of the issues linked to the water resources management. On-going projects such as PROMOVARE initiatives, the Community Action Plan for Climate Resilience (PAC-RC) and the PDIPC paved the way for the proposed project. Consequently, in terms of building infrastructures, the targeted populations and local authorities understand the importance of building resilient infrastructure and are aware of the adaptation benefits. In areas that have not yet been subject to previous interventions, the cost-effectiveness would have been lower as the project would have devoted a greater part of its budget envelope to raising awareness and communicating with the populations concerned.

Training of professional maintenance staff for water infrastructures

86. The project would have been less cost-effective without maintenance training benefiting local communities accompanying the building of water infrastructures. Indeed, by training youth in center formation to be able to ensure the maintenance of the hybrid water systems, communities become self-sufficient to perpetuate their own benefits. Without this notion of self-training but also this will of « learning by doing », the project would have dedicated a bigger part of its budget to professional maintenance staff (internal or external to the country), thus reducing the cost-effectiveness of the project.

Introduction of 2 or 3 large multipurpose infrastructures

The output 2.2 could have focused on the implementation of 2 or 3 large-scale infrastructures for water management instead of developing multiple smaller infrastructures in different villages. This would have made the replication of the intervention as well as the maintenance and sustainability less likely. Implementing a larger number of small infrastructures helps reaching a larger span of beneficiaries and increases the range of lessons learned collected.

[1] Kori is a temporary watercourse caused by the flooding of ponds.They are usually transporting a significant amount of water and solids (including sand), and are responsible for erosion. Their soils are hydromorphic, which gives them the swampy character favourable to market gardening and arboriculture..

[2] Contribution du Consultant Génie Rural, Djibo Niandou, Novembre 2017, Projet : "Planification et Financement de l'Adaptation aux changements climatiques, cas du Niger" See annex F to the Project Document

[3] Bachir Altiné, M. (2017), Rapport thématique sur les ressources en eau pour la formulation du projet de "Planification et financement de l'adaptation aux changements climatiques au Niger"

[4] http://www.ne.undp.org/content/dam/niger/docs/UNDP-NE-PDES%202017-2021.pdf

[5] http://www.hydraulique.gouv.ne/

[6] DBD-Ordonnance n° 2010-09 du 1er avril 2010, portant Code de l'eau au Niger - J.O.Sp n°9 du 29 avril 2010, page 112

[7] http://www.reca-niger.org/IMG/pdf/SPIN_FINALE_Niger.pdf

[8] http://watergovernance.org/programmes/goal-wash/niger/

[9] https://www.thegef.org/project/implementing-napa-priority-interventions-build-resilience-and-adaptive-capacity-agriculture

[10] Danguioua, A. (2017) Rapport thématique sur les politiques publiques pour la formulation du projet de "Planification de l'adaptation aux changements climatiques au Niger"

[11] https://www.climatefinance-developmenteffectiveness.org/about/what-cpeir

[13] Artificially created slope around a field. The technology evacuated excessive rainfalls and maintains stable levels of soil humidity.

[14] No-regret options are those that are justified by current climate conditions and further justified when climate change is considered, e.g. additional off-farm sources of income will provide livelihood benefits extreme weather events increase in frequency. Lim. B, and E. Spanger-Siegfried. 2004. Adaptation policy frameworks for climate change: developing strategies, policies and measures. Cambridge University Press, Cambridge, UK pp 253.

[15] See annex F for Estimation of water infrastructures implementation costs

A.2. Child Project?

If this is a child project under a program, describe how the components contribute to the overall program impact.

N/A

A.3. Stakeholders

Please provide the Stakeholder Engagement Plan or equivalent assessment.

Documents Title Submitted

In addition, provide a summary on how stakeholders will be consulted in project execution, the means and timing of engagement, how information will be disseminated, and an explanation of any resource requirements throughout the project/program cycle to ensure proper and meaningful stakeholder engagement.

38. The implementation strategy for the proposed LDCF project includes extensive stakeholder participation. The stakeholder's involvement during the implementation phase are provided in the table below. More details are available in Annex H to the Project Document – Stakeholder's engagement.
39. Relevant partners, particularly in the framework of multilateral (WB, ADB, EU) and bilateral (GIZ) cooperation, as well as regional entities (ACMAD, AGRHYMET) will be invited to participate in consultations and provide technical support.
40. The Executive Secretariat of the National Council on Environment for Sustainable Development of Niger (SE/CNEDD): As the main national body in charge of monitoring the implementation of the UNFCCC, the SE/CNEDD is in charge of promoting the integration of CCA into economic and social development strategies, plans, programmes and projects. The SE/CNEDD will be Implementing Agency and chair the Project Steering Committee (PSC). It will be in charge of the coordination and implementation of each activity to contribute to the success of the project's actions and impacts. The SE/CNEDD will ensure the coordination between project stakeholders and ministries involved and that all activities implemented are in line with the rationale of sustainability and gender equality.

Outcomes	Outputs	Institutions
Institutions of coordination, animation, resource mobilization, and impetus for reforms and monitoring and evaluation of effects and impacts		
	1.1 CCA is integrated into national and local budgeting and planning frameworks, especially for the water sector	Departments for Rural Development Ministry of Finance Cellule Eau-Environnement ; Cellule Agriculture-Elevage Ministry of Agriculture and Livestock
	1.2 National, subnational and local stakeholders are trained on mainstre	Governor Executive Secretary of the CNEDD Ministry of Environment and Sustainable Development (ME/DD) Ministry of Agriculture and Livestock Ministry of Finance

Outcome 1 Integrate climate change adaptation in relevant water-related budgeting and planning frameworks at national and local levels, with a focus on water resources management measures	aming CCA practices for en-hanced and sustainable water resources management	Ministry of Finance National Directorate of Meteorology Ministry of Hydraulics and Sanitation Ministry of Planning 3N Initiative High Commission 3N Regional Coordination Unit
	1.3 Good CCA practices and information is shared between stakeholders to facilitate the implementation of the sectoral NAP	Governor Regional Council Regional Directorates of Planning, Community Development, Agriculture, Environment, Livestock, Hydraulics and Scientific Research (INRAN) Communes Prefectures National Directorate of Meteorology
	1.4 Campaigns are launched to inform and sensitize CCA and water resources management, and aware-ness is raising among the population on the effects of climate change on water resources	Commune National Directorate of Meteorology Ministry of Population, Child Protection and Advancement of Women Universities of Tahoua, Tillabéry et Zinder de Maradi
Outcome 2 Disseminate economically sustainable hybrid village water systems and multipurpose infrastructures	2.1 Hybrid household water supply solutions and smallholder irrigation systems are successfully pro-moted in vulnerable communities	Regional Directorates of Planification, Community Development, Agriculture, Environment, Livestock, Hydraulics and Scientific Research (INRAN) Ministry of Hydraulics and Sanitation Ministry of Agriculture and Livestock Governor
	2.2 Climate-smart water facilities are installed in the targeted sites	Prefecture 3N Initiation Regional Coordination Regional Council National Directorate of Meteorology

OUTCOME 3 Establish evidence-based knowledge to inform policies and investments on adaptation in the water sector	3.1 Tailored information services and products on water are set up to respond to the private sector and decision-makers audience needs	Ministry of Hydraulics and Sanitation Ministry of Environment and Sustainable Development (ME/DD) Governor Universities of Tahoua, Tillabéry et Zinder de Maradi Communes
	3.2 Knowledge management and M&E systems are established in the water sector	I 3N High Commission Ministry of Hydraulics and Sanitation Ministry of Environment and Sustainable Development (ME/DD) Governor Universities of Tahoua, Tillabéry et Zinder de Maradi I 3N Regional Coordination
	3.3: An online community platform is implemented	Ministry of Hydraulics and Sanitation Ministry of Environment and Sustainable Development (ME/DD) Ministry of Agriculture and Livestock Ministry of Population, Child Protection and Advancement of Women Regional Directorates of Planification, Community Development, Agriculture, Environment, Livestock, Hydraulics and Scientific Research (INRAN) Communes
		Governor Regional Coordination of the Initiative 3N Executive Secretariat of CNEDD (Rio Conventions Focal Point)

PROJECT IMPLEMENTATION	Ministry of Environment and Sustainable Development (ME/DD) CNEA Ministry of Hydrolics and Sanitation Ministry of Planning Communes I 3N High Commission

41. The stakeholder involvement strategy will be based on the project's sites in order to be in line with the process of decentralization and transfer of competencies of sectorial ministries to local territories.

At project start:
42. This phase requires information and awareness-raising activities for stakeholders. These actions will aim to inform stakeholders on the issues, objectives, and project activities, as well as about their positive and negative effects and the measures proposed to mitigate and/or optimize these effects, and finally to inform them on the mechanism provided for their effective involvement in the project.
43. In practice, a series of briefings and awareness-raising workshops will need to be organized in the framework of the project for target communities in target villages. These meetings will bring together not only the traditional authorities (chiefs), but also local elites and local politicians (MPs, mayors). The gender aspect must be taken into account by ensuring the representation of women, young people, and all social strata. These briefings will be organized in collaboration with local administrative authorities.

During the implementation phase:
44. The involvement of local communities in the implementation of project activities will be achieved by (i) prioritizing local people for project recruitment and permanently strengthening their capacities to prepare for the post-project phase, and, (ii) establishing partnerships with local organizations already working with communities (NGOs, CSOs, associations) in the implementation of project activities under the project and building their capacity to achieve better results.
45. At the local level, the project will establish a multi-stakeholder platform, which will include representatives from the following organizations: local NGOs, women and youth associations, local authorities, and famers' associations. In the project area, the project will facilitate the establishment of a platform composed of local elected MPs, senators, and mayors. At the regional level, the project will establish a governance platform, which will be chaired by each Governor and will be composed of various heads of departmental services, the private sector, NGOs, and elected representatives.

Select what role civil society will play in the project:

Consulted only;

Member of Advisory Body; Contractor;

Co-financier;

Member of project steering committee or equivalent decision-making body;

Executor or co-executor;

Other (Please explain)

A.4. Gender Equality and Women's Empowerment

Please briefly include below any gender dimensions relevant to the project, and any plans to address gender in project design (e.g. gender analysis).

46. In 2014, the Nigerien population was estimated at 18.2 million people, 52% of whom were women (in Tondikiwindi 50,26%; Ouallam 51,71%; Tenihya 51,55%; Taknamat 50,9%; Tchintabaraden 50,09%; Kao 50,90%; Tabalak 50,38%). The country encourages gender equality and women's rights: the Nigerien Constitution grants equal rights regardless of gender, and Niger ratified both the Convention on the Elimination of All forms of Discrimination against Women (CEDAW) in 1999 and the Optional Protocol on violence against women in 2004 . Niger has also signed but not ratified the Protocol to the African Charter on Human and Peoples' Rights on the Rights of Women in Africa and set up a Ministry of Social Development, Population, Advancement of Women and Protection of Children since 1998. In spite of those political efforts, women's empowerment in Niger remains extremely limited; the country is ranked 157 out of 159 in the Gender Inequality Index.

47. In Niger, women have a major role in agriculture production, performing most of the agricultural tasks , including the fetching of water. Women's agricultural livelihoods are relatively low compared to men, because they generally face more severe constraints than men in accessing productive resources (land, agricultural inputs, technologies, credits, etc.). This vulnerability is further exacerbated by the high dependency of the sector on rain-fed agriculture inducing serious implications on women and their households in the case of severe weather disruptions such as drought and flood. Drought-induced yields reduction and water scarcity prevent women from generating income to provide food to their households and forces them to go farther and longer in search of water despite insecurity. The decrease in water points and grazing land is also forcing pastoralists to move farther away with their livestock, and the family is then left entirely to the woman's responsibility. This situation has many negative implications for the livelihoods of women and for their households, especially female-headed, which comprise 32% of the households in Niger. Considering gender issues when addressing the resilience of rural communities to climate change is therefore essential. According to UN Women, it is estimated that if the gender gap in agricultural productivity in Niger is closed, there would be an increase in crop yields of 10% to 30% per annum and an additional GDP increase of about 0.25% annually. This would translate into a financial gain of approximately US$ 17 million per year, an amount which could lift over 25,000 Nigeriens out of poverty.

48. The project will ensure that women and the youth benefit directly from the activities and infrastructures that will be put in place. Component 1 will give women access to trainings and workshops on resilient water resources management practices and benefits. This will reduce the existing gender gap on technology access and agricultural productivity and result in women empowerment and a lightened workload. These results will also be obtained with the Component 2 and the development of climate-resilient water systems. This will significantly reduce the impacts of droughts on agricultural yields and water scarcity hence reducing the length of women's often dangerous daily journeys to fetch water and the threats of food insecurity caused by crop loss. As a result, women and youth will have more time available for other activities, whether it is income-generating activities or the participation to the citizen life of their village or to access education. Gender issues will finally be considered within all the decision-making processes of Component 3, thus ensuring a participation and consideration of women within the community platform and monitoring plans. This will include integrating women's perspectives and making use of their specific knowledge of adaptation, as well as local survival strategies.

49. Consequently, by diminishing water-related issues and agricultural gender gap, the project will lead to an improvement of women and therefore household livelihoods and to women empowerment with education and visibility in decision-making processes. The project has therefore been carefully designed to maximize the potential for contributing to women's empowerment and for gender mainstreaming. It will consider gender issues to ensure equal participation of men and women in decision-making processes, and in the implementation of adaptation activities. The project team will also ensure that these activities do not exacerbate gender inequalities.

50. Finally, the project is based on the principle that gender mainstreaming will lead to more resilient communities and therefore more successful adaptation. It will ensure the participation of the most vulnerable groups, including women and youth, in the document preparation process and will also ensure that they are the main beneficiaries of the investments made under Component 2.

Documents

Title	Submitted

Does the project expect to include any gender-responsive measures to address gender gaps or promote gender equality and women empowerment?

If yes, please upload document or equivalent here

If possible, indicate in which results area(s) the project is expected to contribute to gender equality:

Closing gender gaps in access to and control over natural resources;

Improving women's participation and decision making

Generating socio-economic benefits or services or women

Will the project's results framework or logical framework include gender-sensitive indicators?

A.5. Risks

Elaborate on indicated risks, including climate change, potential social and environmental risks that might prevent the project objectives from being, achieved, and, if possible, the proposedmeasures that address these risks at the time of project implementation.

Project risks				
Description	**Type**	**Impact, Probability and risk assessment**	**Mitigation Measures**	**Owner**
Extreme climate events such as floods and droughts could disrupt project activities and/or damage ecosystems and infrastructure.	Environmental	P=3 I=3 *Medium*	Coordination will be undertaken with partners for disaster response to ensure the protection of the implemented hybrid systems and irrigated water infrastructures. An appropriate emergency plan will be drawn to take quick action. Where damage occurs before ecosystem management adaptation approaches can reduce the impacts of extreme events, supplementary infrastructural approaches and planting will be undertaken.	*Project manager*
The preparation, construction and operation of some hydrological infrastructures could have temporary detrimental effects on physical, biological or human environments.	Environmental and social	P=3 I=2 *Low*	Environmental and social studies conducted prior to any infrastructure work susceptible to have a negative impact will analyse the risks and the best mitigation measures.	*Project Manager*
Limited capacity within relevant m	Organizational	P=1	A major part of the project aims to strengthen institutional and technical capacity for planning, d	*Project manager and national authoritie*

inistries for supp orting the NAP p rocess	Environme ntal and S ocial	I=3 *Low*	esigning and implementing local level adaptatio n actions. Technical capacity building expertise will be contracted to work with and train local te chnical staff.	*s Project Ma nager and loc al/regional a uthorities*
Irrigation work co uld generate real or perceived usag e conflicts betwe en communities as well as put pre ssure on ecosyst ems	Organizati onal Environme ntal and S ocial	P=1 I=3 *Low*	Environmental and Social studies will ensure tha t the design of any irrigation work does not infri nge on other communities' usage of the water r esource. In the same spirit, environmental studi es will ensure that reserved ecological debits ar e respected in cases where the water withdrawa l is non-marginal. All such infrastructures will in clude a broad group of stakeholders in their desi gn and preparation as to minimize risks of confli ct. All stakeholders will have access to the gove rnance body responsible for the infrastructure a s well as formal means to voice their concerns.	*Project mana ger and natio nal authoritie s Project Ma nager and loc al/regional a uthorities*
Weak coordinatio n with on-going a daptation proces s	Organizati onal	P=2 I=2 *Medium*	An operational coordination and consultation m echanisms will be established to ensure owners hip of the process and engagement by all actor s. In addition, SE/CNEDD is a central actor in cli mate-related initiatives, and its role as impleme nting partner willfacilitate the coordination betw een on-going initiatives.	*Project Mana ger and imple menting part ner*
Low capacity of l ocal communitie s to maintain and sustain water infr astructures	Organizati onal	P=2 I=3 *Low*	Relevant trainings and sensitization activities wi ll be conducted under outcome 2 to support loc al communities to maintain and sustain the wat er infrastructures and understand the need for t heir involvement in the sustainability of the infra strucures.	*National and local authoriti es*

51. As per standard UNDP requirements, the Project Manager will monitor risks quarterly and report on the status of risks to the UNDP Country Office. The UNDP Country Office will record progress in the UNDP ATLAS risk log. Risks will be reported as critical when the impact and probability are high (i.e. when im-pact is rated as 5, and when impact is rated as 4 and probability is rated at 3 or higher). Management responses to critical risks will also be reported to the GEF in the

annual PIR.

A.6. Institutional Arrangement and Coordination

Describe the Institutional arrangementfor project implementation. Elaborate on the planned coordination with other relevant GEF-financed projects and other initiatives.

1. Below is a list of the institutional arrangements for project implementation:
   - Project Board: The Project Board will take corrective action as needed to ensure the project achieves the desired results. The Project Board will hold project reviews to assess the performance of the project and appraise the Annual Work Plan for the following year. In the project's final year, the Project Board will hold an end-of-project review to capture lessons learned and discuss opportunities for scaling up and to highlight project results and lessons learned with relevant audiences. This final review meeting will also discuss the findings outlined in the project terminal evaluation report and the management response.
   - Project Implementing Partner: The Implementing Partner is responsible for providing any and all required information and data necessary for timely, comprehensive, and evidence-based project reporting, including results and financial data, as necessary and appropriate. The Implementing Partner will strive to ensure project-level M&E is undertaken by national institutes, and is aligned with national systems so that the data used by and generated by the project supports national systems.
   - UNDP Country Office: The UNDP Country Office will support the Project Manager as needed, including through annual supervision missions. The annual supervision missions will take place according to the schedule outlined in the annual work plan. Supervision mission reports will be circulated to the project team and Project Board within one month of the mission. The UNDP Country Office will initiate and organize key GEF M&E activities including the annual GEF PIR, the *independent mid-term review* and the independent terminal evaluation. The UNDP Country Office will also ensure that the standard UNDP and GEF M&E requirements are fulfilled to the highest quality.
   - The UNDP Country Office is responsible for complying with all UNDP project-level M&E requirements as outlined in the UNDP POPP. This includes ensuring the UNDP Quality Assurance Assessment during implementation is undertaken annually; that annual targets at the output level are developed, and monitored and reported using UNDP corporate systems; the regular updating of the ATLAS risk log; and the updating of the UNDP gender marker on an annual basis based on gender mainstreaming progress reported in the GEF PIR and the UNDP ROAR. Any quality concerns flagged during these M&E activities (e.g. annual GEF PIR quality assessment ratings) must be addressed by the UNDP Country Office and the Project Manager.
   - The UNDP Country Office will retain all M&E records for this project for up to seven years after project financial closure in order to support ex-post evaluations undertaken by the UNDP Independent Evaluation Office (IEO) and/or the GEF Independent Evaluation Office (IEO).
   - Project Management Unit: located within the SE/CNEDD, it is the operational body in charge of planning, management, and coordination of the implementation of the project. It will be placed under the authority of the project manager, and it will include one finance and administration staff, one water management expert, and one monitoring evaluation expert. In addition, 4 United Nations volunteers will be recruited to support the national project management unit.

· UNDP-GEF Unit: Additional M&E and implementation quality assurance and troubleshooting support will be provided by the UNDP-GEF Regional Technical Advisor and the UNDP-GEF Directorate as needed.

2. The project will also put an emphasis on the creation of partnerships at the national and regional level to ensure the sustainability of the actions. It will capitalize and create synergies with past and existing CCA GEF-financed projects such as:

(Closed) Scaling up Community-Based Adaptation (CBA) in Niger: Large-scale Transposition of Community Adjustment in the Maradi Region **Responsible institution**: UNDP, **Implementing entity**: SE / CNEDD **Budget**: US$4.876 million **Donors**: UNDP, GEF-LDCF, Government of Niger **Period**: 2014-2018	The project ensured the integration of climate issues into development plans and strategies at the local and regional levels, by creating the capacity to adopt and to implement agricultural and rural systems as well as adaptable measures, guided by reliable technical advice on climate and agriculture, and strives to support a process to create more climate-resilient economies.	Thanks to the project, the capacities of the municipal authorities will be strengthened with regard to climate change. Local development plans will be revised to integrate climate change, using the guide and methodology developed by CNEDD.	The project is a good entry point for integrating climate change into local development plans. Project experiences will be capitalized, for the elaboration of the local drinking water supply and sanitation plans, integrating CCA considerations (output 3.3).
(Closed) Climate Information and Prospective Development Project (PDIPC) - Pilot Program for Climate Resilience (PPCR). **Responsible institution: Min. of Community Development and Land Use Planning and (MDC/AT)** **Implementing entity: Directorate of National Meteorology (DMN / Min of Transport)** **Budget: US$15,000,000 (US$1**	The project is part of Niger's PPCR and aims to (a) improve the quality of climate information and products, (b) improve climate modeling, prediction, and information dissemination, making it available to key users (in this case, farmers and pastoralists) in a way that they can easily understand it, and c) strengthen the EWS (early warning system) and develop	The quality and availability of climate information is crucial in the NAP process This project focuses on building the capacity of the National Meteorological Directorate which plays a central role in providing climate information, climate data and conducting vulnerability analyzes and designing vulnerability scenarios.	The LDCF-funded project will back on the climate information platform established, to support the the climate vulnerability assessment of targeted communes (Output 1.3). Climate information generated by the proposed project could also inform the electronic platform establi

1,000,000 loan, US$4,000,000 grant) Donors: AfDB, IFC Period: Project approval July 2012 / Closing date October 2018	an electronic platform for sharing and analyzing meteorological information.		shed under the PDIPC initiative. The two projects will work jointly to develop training modules on (output 1.2)
(Closed) Implementation of NAPA priority interventions to build resilience and adaptive capacity of the agriculture sector in Niger Institution responsible: UNDP Executing entities: SE/CNEDD, municipalities, Ministry of Agriculture, Ministry of Water Budget: $8.1m Donors: Global Environment Facility – Least Developed Countries Fund (GEF-LDCF), Canada, UNDP, Government Projet period: 2010 - 2015	The project focused on activities at local level, where it has played a key role in eight communes in eight different regions of Niger in raising awareness of climate change and in enhancing resilience through income-generating activities (IGA) and more resilient agricultural techniques in particular. The new phase of the project, under Canadian funding, focuses on further strengthening the livelihoods of local population and on disseminating best practices.	Through the project, stakeholders have been trained on climate change at local level, and the capacities of² the municipalities' authorities have been built with regards to climate change and management. The local development plans have been revised to mainstream climate change, using the guide and methodology developed by the CNEDD.	The project collected and analysed information, experiences, and lessons learned to produce and disseminate knowledge that can be shared and usefully applied in other contexts. This project could provide entry points for scaling up opportunities under the NAP process.
(Closed) Implementing NAPA Priority Interventions to Build Resilience and Adaptive Capacity of the Agriculture Sector to Climate Change (GEF ID 3916) Responsible entity: GEF-funded NAPA Implementing entity: National Council for Environment and Sustainable Development Budget: US$ 7 million	The project included a set of measures to enhance adaptation of the agriculture and water resources sectors to address urgent and anticipated climate change impacts.	The project has developed a series of successful adaptation measures and practices in the sector of agriculture.	The proposed project collected and analysed information, experiences, and lessons learned to produce and disseminate knowledge that can be shared and usefully applied in other contexts. This project could provide entry points for scaling up opportunities under the NAP process.

Starting date: March 2009 **Closing Date**: April 2013			Adaptation measures and techniques developed by the project will be capitalized by the proposed project during the design and implementation of water adaptation techniques for agriculture (Outcome 2).
(Closed) Integrating Climate Resilience into Agricultural and Pastoral Production for Food Security in Vulnerable Rural Areas through the Farmers Field School Approach (GEF ID 4702) **Responsible entity**: FAO **Implementing entities**: Ministry of Agriculture and Husbandry (MAE) in collaboration with the SE/CNEDD, the Ministry of Territory Plan, Ministry of Environment (ME) and Secretariat of the Rural Development Strategy (SDR) **Budget**: US$ 3.8 million **Donors**: LDCF, Ministry of Agriculture **Starting date**: June 2012 **Closing date**: 2016	The project contributed to the integration of climate resilience into agricultural and pastoral production for food security in vulnerable rural areas of Niger through the Farmers Field School.	This LDCF project addressed the need for developing proven and cost-effective outreach and extension approaches and methods in order to allow for an effective up-scaling of CCA strategies and practices, required to ensure increased climate resilience of Niger's key agricultural and agro-pastoral production systems, and lessen the vulnerability to climate change of on-going and future investments in the agro-pastoral sector.	The proposed project will capitalize on lessons learned, from the implementation of Farmers Field School, in paticular methods used and their efficiency, for the development of hybrid village water systems and multipurpose infrastructures Outcome 2).

Additional Information not well elaborated at PIF Stage:

A.7. Benefits

Describe the socioeconomic benefits to be delivered by the project at the national and local levels. How do these benefits translate in supporting the achievement of global environement benefits (GEF Trust Fund) or adaptaion benefits (LDCF/SCCF)?

National benefits

54. The project builds on a relevant national framework of CCA-related policies, defined and imple-mented through budget allocations. This facilitates the mainstreaming of adaptation at all levels of the country:

- The project will advance the NAP process in the water sector, through the establishment of sec-toral institutional mechanism steering the process and liaising with the national level (Output 1.1.), the development of climate-related skills among key staff in national institutions and deci-sion-makers (Output 1.2.), the generation of climate evidence-based to inform adaptation plan-ning in this sector (Output 1.3.), and the development of indicators and markers to facilitate CCA mainstreaming into planning and budgeting.
- The project will complete the NAPA adaptation measures, as well as match orientation of the PRS and SDR priorities.
- National capacities for coordination and climate mainstreaming in planning and budgeting pro-cesses, will be improved through capacity building of key personnel from all relevant institutions on climate change, and budget tagging and tracking tools for climate finance. These concerted efforts by the SE/CNEDD, the National Commission for Water and Sanitation (CNEA), and the Ministries of Planning and Finance will contribute to the implementation of progressive proce-dures and tools that can facilitate CCA integration into budget processes.
- By designing, demonstrating, and disseminating integrated water management techniques aligned with adaptation priorities, the project support the implementation of the PANGIRE , and contributes to strengthen the adaptive capacity of population in line with sectoral objectives.
- The project “Scaling up Community Based Adaptation (CBA) in Niger is an appropriate entry point for integrating climate change into local development plans. Project experiences will help to apply the methodology in revising local drinking water sanitation plans. In addition, the implemen-tation of NAPA priority intervention in Niger has played a key role in raising awareness of climate change and in enhancing resilience through income generating activities and more resilient agri-cultural techniques in particular. The project will therefore build on these experiences to sustain their impacts in the long-term and scale-up opportunities in the NAP process.
- The GCF NAP project, will advance medium and long-term adaptation planning and budgeting in Niger. This project will be implemented in close cooperation with the GCF-financed NAP initiative, to avoid duplications and achieve the highest possible impacts for climate change adaptation planning at the national level.

55. The proposed project will specifically focus on CCA and the water sector. The valorization of wa-ter resources offers a specific opportunity to ensure the provision of CCA services at the national level. The sector is recognized and promoted as a key pillar in the overall economic development of the coun-try. Because of the close tie with the GCF- NAP project, the proposed LDCF project will pave the way for the sectoral NAP on water resources management. In addition, by implementing CCA interventions, the proposed project will support the GoN in reaching its development targets and the SDGs.

Local adaptation benefits

56. In the same way that the national government will benefit from significant capacity building, both departmental and municipal authorities will be strengthened in their capacity to incorporate climate risks and opportunities in their planning and budgeting work related to water resources management. As for the local population, the benefits would be plural:

57. Water for agriculture: At the local level, the second component will introduce hybrid solutions that offer sustainable opportunities to facilitate smallholders' access to alternative sources of irrigation for their high-value vegetable crops through small-scale irrigation schemes, even in case of droughts. These improved methods will enable the development of a higher quantity but also a better quality in vegetable and crop production. Moreover, irrigation ponds (manual or gravity irrigation) will secure the development of livestock, including dairy production. In addition, access to water will reinforce the resilience of nomad and sedentary livestock by improving the herd's health, and hence decreasing the vulnerability of breeders.

58. Drinking water: Rural communities will benefit from a safer and climate resilient drinking water access. This will improve health and sanitation conditions. Indirectly, with a larger production of vegetables, meat, and milk, the nutritional situation of the population is also expected to improve. When rural communities find a way to build and operate their own water supply systems, they inevitably build multipurpose systems, which combine household drinking water supplies with a variety of productive uses of water. Multi-purpose village water supply systems follow the pattern of diverse productive uses of water already integrated by rural communities into the systems they build for themselves. In addition, the implementation of productivity optimization methods and access to markets adapted to the village context will follow the integration of hybrid systems.

59. Social benefits: The proposed project will impact the social sector as well. In order to ensure the continued existence of the irrigation infrastructures (manual or gravity irrigation), communities must man-age it. In order to organize this maintenance, a participatory approach by all the villagers is anticipated, mostly from the youth and women who are generally the most excluded from these maintenance tasks. The idea is to select several young villagers on a voluntary basis to ensure the maintenance of the irrigation ponds. They will be trained to learn relevant skills related to water management in the context of climate change. Thus, irrigation ponds will produce social benefits in terms of integration and participation of excluded populations (youth and women) in the daily decision-making of the targeted communities, and will generate a positive impact on the rate of employment. As a result, the maintenance of irrigation ponds will further develop the associative life of communities but also political and civil life by implementing an administration board to manage the new infrastructures.

A.8. Knowledge Management

Elaborate on the Knowledge management approach for the project, including, if any, plans for the project to learn from other relevant projects and initiatives (e.g. participate in trainings. conferences, stakeholder exchanges, virtual networks, project twinning) and plans for the project to assess and document ina user-friendly form (e.g. lessons learned briefs, engaging websites, guidebooks based on experience) and share these experiences and expertise (e.g. participate in community of practices, organize seminars, trainings and conferences) with relevant stakeholders.

60. The output 3.3 will directly contribute to the knowledge management strategy of the project. An online community platform will be set up to foster partnerships between local authorities and beneficiaries, to enable them to assess progress made, and support the scaling up of local experiences, through the availability of options impact assessments and appraisal. Under this project, such partnerships will be extended to research institutions intervening in the water sector, including local and international research centers, in order to support the performance and impact assessments in the intervention sites, using the monitoring and evaluation framework established under the output 3.2.
61. It is expected that the SE/CNEDD, coordinating this platform, will facilitate its expension to other vulnerable sector, therefore paving the way for the NAP process, and the sectoral NAPs. Adequate trainings will be designed and provided to the partners to efficiently perform reviews and identify options and opportunities for scaling-up. This platform, by receiving inputs from stakeholders on innovative climate change adaptation approaches and practices for sustainable water management, as well as thorough reviews of these options, will be an open source database between all the actors to reinforce the multilateral communication and provide up to date information for the widespread upscaling of successful adaptation practices, including by building on the activities conducted under the Outcome 2.
62. This platform will also be informed by the platform developed under the PDIPC for sharing and analyzing meteorological information. For instance, by sharing information and gathering knowledge, it will highlight success factors of local experience in PDCs and Local Water and Sanitation Plans (PLEA). Based on the assessment of the potential, opportunities and lessons learned from intervention sites and project investments, including from the private sector, this output will also support the development of a strategy for the scaling up of succesful initiatives. These lessons learned will feed into the strengthening of the institutional framework, supported under the Outcome 2.
63. In addition, the project will support the development of the NAP process in the water sector, using the knowledge and lessons learned collected following the M&E framework (output 3.2) for the field-tested interventions (outcome 2). This will be also strengthened with the information collected in the on-line platform (output 3.3) which will give a broader range of data, in particular for the water sector.
64. Finally, the training of trainers approach will enable the spreading of the knowledge to a wide range of decision makers and small holder farmers, including women.

B. Description of the consistency of the project with:

B.1. Consistency with National Priorities

Describe the consistency of the project with nation strategies and plans or reports and assessements under relevant conventions such as NAPAs, NAPs, ASGM NAPs, MIAs, NBSAPs, NCs, TNAs, NCSAs, NIPs, PRSPs, NPFE, BURs, INDCs, etc.

This project is consistente with Nigerien national priorities as detailed below:

• The National Adaptation Programme of Action to Climate Change (NAPA), adopted by Niger in 2006, aims at implementing the National Strategy and its Action Plan on Climate change and variability, in order to mitigated the adverse effects of climate change on most vulnerable populations, in view of sustainable development and poverty reduction in Niger. The planned activities with LDCF support would add value to the 2006 NAPA by addressing medium- and long-term adaptation needs as part of development planning processes. It will also provide a strong strategic plan and policy dialogue embracing and integrating sector-wide and programmatic approaches in a coherent policy institutional and regulatory framework. Furthermore, the project is supporting the implementation of following NAPA priorities:

o Priority#3: rehabilitation of ponds for the development of irrigated agriculture. Under component 2, the project expects to establish multi-purpose infrastructures in sensitive ponds allowing surrounding communities to restore agriculture practices;

o Priority #4: diversification and intensification of irrigated agriculture. With the promotion of hybrid system solutions, sufficient water will be made available to meet the participating villagers' needs both for clean drinking and small plot irrigation.

o Priority #13: bank protection and rehabilitation of silted ponds with the realisation of multi-purpose infrastructures to protect infrastructure and agricultural land from erosion and flooding; and

o Priority #14: strengthening technical capacity of rural producers. training will be providers to young and women on river protection techniques, the maintenance of infrastructure and socio-environmental monitoring, etc.

• Niger Intended Nationally Determined Contribution (INDC), submitted in September 2016. The INDC indentified the water sector as a priority adaptation intervention, after agriculture (with an accent on climate-smart agriculture), animal husbandry and forestry. Considering that water is directly supporting climate-smart agriculture and animal husbandry, this project is strongly aligned with the priorities defined under the INDC. The NDC for Niger is not available yet.

• Niger National Adaptation Plan (NAP). This project is supporting the implementation of the NAP roadmap defined by the Government of Niger and will directly support the formulation of the NAP framework for the water sector.

The project is also aligned with national priorities such as:

· The 2017-2021 Economic and Social Development Plan (PDES), was adopted by the Council of Ministers of Niger. It followed the 2012-2015 PDES, the Poverty Reduction Strategy and the Accelerated Poverty Reduction Strategy and aims to be the framework for all development strategies in Niger. It identifies five priorities: cultural renaissance, social development and demographic transition, accelerating economic growth, improving governance, peace and security, and sustainable environmental management. Its Priority Action Plan includes a budget line for the promotion of CCA and CCM measures. The PDES dedicates an entire program to improve development management. With regards to budget programming, the PDES is implemented through the Multiannual Budget and Economic Programming Document (DPBEP) and the Multiannual Expenditure Programming Documents (DPPD) of sectoral ministries covering a period of three years. They are updated through the annual macroeconomic and budgetary framework exercises, The PDES orientations reflect the various initiatives taken by the GoN to advance the adaptation agenda.

- The Niger Government created a High Commission for the 3N Initiative (“the Nigeriens Nourish the Nigeriens Initiative, or I3N, in 2011 and a strategy was adopted in April 2012. The I3N is integrated in the PDES as the third priority axis. Its objective is to build national capacities with regards to food production, supply and resilience to food crises and disasters. The I3N is a high level initiative supported by the President. It has a lot of visibility and its cross-sectoral nature would also constitute a good entry point for climate mainstreaming, especially as food security and climate change are closely linked in Niger. Climate change is supposed to be addressed in one of the working groups. There could be a focus in ensuring climate change activities are monitored through its M&E system under development.
- The National Mechanism for Disaster and Food Crises Prevention and Management (DNPGCCA) and the CNEDD are both under the Prime Minister’s office and this should in theory facilitate synergies. The DNPGCCA is developing a database which could be linked to the climate information platform as there are some overlaps in data collection and management. Climate change mainstreaming could also intervene at local level with closer relations between DRR/DRM mechanisms and CCA activities, especially with regards to information management and early warning systems.

C. Describe The Budgeted M & E Plan:

Monitoring and Evaluation Plan and Budget:			
GEF M&E requirements	Responsible Parties	Indicative costs (US$)	Time frame
Inception Workshop	Implementing Partner PM/Coordinator	Total: 30,000	Within 60 days of CEO endorsement of this project.
Inception Report	PM/Coordinator	None	Within 90 days of CEO endorsement of this project.
Monitoring of indicators in project results framework	M&E Specialist	Per year: 5,000	Annually prior to GEF PIR. This will include GEF core indicators.
GEF Project Implementation Report (PIR)	RTA UNDP Country Office [1] PM/Coordinator	None13	Annually typically between June-August
Monitoring all risks (UNDP risk register)	UNDP Country Office Coordinator/M&E Specialist/UNVs	*10,000*	On-going.
Monitoring of stakeholder engagement plan	UNVs	*20,000*	On-going.
Monitoring of gender action plan	UNVs	*19,600*	On-going.
Supervision missions	UNDP Country Office	None[2]	Annually
Oversight missions	RTA and BPPS/GEF	None14	Troubleshooting as needed
Mid-term LDCF Core indicators	*PMU*	*USD 9,750*	*Before mid-term review mission takes place.*
Independent Mid-term Review (MTR) [56]	Independent evaluators	*USD 30,000*	*January 2023*

Terminal *LDCF* Core indicators	Project Coordinator / UNVs	*USD 10,000*	Before terminal evaluation mission takes place
Independent Terminal Evaluation (TE)	Independent evaluators	USD 40,000	*Add date included on cover page of Project Document*
TOTAL indicative COST		*USD 194,350*	

This table aims at providing more clarity on the overall M&E activities to be conducted during implementation, and the indicative costs are not additional to the total budget presented in section X of the project document (no double-costing).

[1] Or equivalent for regional or global project

[2] The costs of UNDP CO and UNDP-GEF Unit's participation and time are charged to the GEF Agency Fee.

PART III: Certification by GEF partner agency(ies)

A. GEF Agency(ies) certification

GEF Agency Coordinator	Date	Project Contact Person	Telephone	Email
Adriana Dinu Director, Sustainable Development (Environment) a.i. Executive Coordinator, Global Environmental Finance United Nations Development Programme	8/28/2018	Henry Rene Diouf	2912503321	henry.rene.diouf@undp.org
Pradeep Kurukulasuriya	2/8/2019	Henry Rene Dious	2912503321	henry.rene.diouf@undp.org
Pradeep Kurukulasuriya, UNDP GEF Executive Coordinator	12/3/2019	Clotilde Goeman		clotilde.goeman@undp.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).

		This project will contribute to the following Sustainable Development Goal (s): SDG 2 – End hunger, achieve food security and improved nutrition and promote sustainable agriculture; SDG 5 – Achieve gender equality and empower all women and girls; SDG 6 – Clean water and sanitation; 8 – Promote inclusive and sustainable economic growth, employment, and decent work for all; SDG 9 – Build resilient infrastructure; and SDG 13 – Take urgent action to combat climate change and its impacts.					
		This project will contribute to the following UNDAF/Country Programme Outcome 2: By 2018, national, regional, and local institutions are using appropriate systems and mechanisms for disaster risk prevention/risk management/ disaster management, sustainable environmental management and food security.					
		This project will contribute to the following UNDP Strategic Plan 2018-2021 Signature solution 3: Enhance national prevention and recovery capacities for resilient societies					
	Objective and Outcome Indicators	**Unit of measurement**	**Baseline**	**Mid-term Target**	**End of Project Target**	**Source of verification**	**Assumptions**
Project Objective: **Strengthen the capacity of national and local institutions and communities to plan and budget for climate change adaptation, while seizing opportunities in the water sector to improve local adaptation and resilience in Niger.**	Indicator 1: Local, national and sector wide policies, plans and processes developed and strengthened to identify, prioritize and integrate adaptation strategies and measures related to the water sector		*4*	25 documents (plans, policies and processes) in the water sector were reviewed to identify entry points for the integration of CCA as a result of the project activities	25 documents (plans, policies and processes) revised by local and national institutions as a result of the project activities	Activity reports Revised documents	National and local institutions are willing to participate in the project activities and to integrate CCA into plans, policies, processes and budgets.
	Indicator 2: Number of direct beneficiaries with decreased vulnerability to climate change and level of decrease		The indicator will be updated according to the baseline during the first year of implementation.	10,000 beneficiaries (at least 50% women) see their average vulnerability reduced by 10% (characterized by rate of access to water, resilience to water scarcity and floods and agricultural yields).	42,450 beneficiaries (at least 50% women) see their average vulnerability reduced by 30% (characterized by rate of access to water, resilience to water scarcity and floods).	Survey in local communities in each target commune	The effects of the projects are significant and occur quickly enough to be reflected in a decrease in vulnerability. In addition, other factors are less important and will not impede attribution. All targeted villages participate actively and implementation goes well.

Component 1: Improving the planning of adaptation in the water sector	Indicator 3: Number of municipalities integrating CCA in relation with water sector into their public policies	8 municipalities targeted by the project PANA resilience integrate CCA into their public policies	The additional 7 municipalities have taken steps to integrate climate change adaptation in these documents.	An additional 7 municipalities have successfully integrated climate change adaptation in these documents.	Consultation with municipalities	UNDP takes practical steps to ensure the inclusion of the CNEDD's guidelines on IDCC in their public policies before validation.
	Indicator 4: Percentage of increase of budget for CCA)	0	20% increase in budget for CCA	25% increase in budget for CCA	post workshop evaluation questionnaire twice a year Survey within NGOs and extension services Activity reports	Politicians and institutions are willing to integrate coordination and consultation to improve their decisions-making processes.
Component 2: Developping field-tested knowledge for IWRM	Indicator 5: Number of people with more secured access to water	0	At least 10,000 people from targeted municipalities with improved access to water services as a result of the project	At least 42,450 of people from targeted municipalities with improved access to water services as a result of the project	Field visits	All targeted villages participate actively and implementation of those infrastructures goes well.
	Indicator 6: Hectare benefitting from better water management	0	500 ha will benefit from better water management	1,765 ha will benefit from better water management.	Field visits Activity reports	All targeted villages participate actively in the surveys and implementation of those infrastructures goes well.
Component 3: Fostering evidence-based decision-making processes	Indicator 7: Availability of a database on climate change adaptation in the water sector for technical partners	0	N/A	A database on CCA related to water sector is available and regularly updated	Number of connection Number of activities listed on the database Number of information loading on the data base	There is a good coordination and cooperation among the stakeholders of the project.

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).

STAP Comment	Response
Under Output 1.2, the focus is on getting a good understanding of climate change adaptation through to stakeholders. However, Component 3 is all about building evidence-based policy decisions. STAP believes that one cannot be achieved without the other. That is, getting a grasp on climate change adaptation will rely on having a good understanding of climate science, projections, and uncertainties. Activities under Output 1.2 and Component 3 should therefore not be conducted independently, and should remain tightly connected through the next stages of project design.	The outcomes are all strongly interconnected and will be implemented as such. The project team will ensure that all the activities are conducted in a comprehensive manner. A mention was made under the descrition of output 1.2 on the need to connect with the outcome 3.
STAP welcomes the focus in Component 2 on water systems and improving water availability and access. We do recommend that in the process of project development, it would be helpful to draw from (and connect to) the substantial set of sustainable land management interventions in Niger; which share many of the same intervention modalities and objectives. Further, this component is really about access to adaptation finance at the local level; and the PIF does not elaborate how the interventions proposed (Outputs 2.1 and 2.2 are all about creating new infrastructure) would more generally improve provision of, and access to finance.	During the PPG, the different stakeholders and project managers were informed about the initiative and were included in the list of stakeholders to connect with during the implementation. Besides, it is expected that lessons learned collected through the different land management interventions, in particular in terms of drought and flood management, in Niger will feed the on-line community platform, therefore informing the design of the LDCF interventions and future interventions. As regards the access to adaptation finance, while it was mentioned in the component title, it was not reflected in the activities, nor in the outcome title. The component has therefore been renamed “Developping field-tested knowledge for IWRM” to align with the planned activities. However, it is worth pointing that the project will improve the access to financing for adaptation by supporting the increasing in national and local adaptation budgets.
Finally, food security and livelihood security are important dimensions of building resilience. The project may want to draw from the substantial experience with social protection interventions, as they are likely to be relevant for both Components 1 and 3. See, for example:	While the outcome 2 will support food security and livelihoods by improving the access to water for agriculture, the project focuses on water resources sector and the outcome 1 and 3 will not directly target the support to social protection interventions. However we take note of these resource

Devereux, Stephen. "Social protection for enhanced food s ecurity in sub-Saharan Africa." Food Policy 60 (2016): 52-6 2. Hoddinott, John, Susanna Sandstrm, and Joanna Upton. "T he impact of cash and food transfers: Evidence from a ran domized intervention in Niger." (2014).	s and it was shared with the UNDP colleagues working on t he NAP-GCF proposal for their consideration.

Germany comment	Response
Germany appreciates that the PIF addresses: 1) improving planning of adaptation; 2) using sector-wide approach to ac cess to adaptation finance at local level; 3) evidence based policy decisions. The aforementioned are of outmost impor tance in achieving the project's objective, however, it is not clearly indicated how these three components form a coher ent and integrated approach. Whereas component 1) and 3) seem to feed well into each other, the linkage of those to co mponent 2) ("mass dissemination of economically sustaina ble hybrid village water systems and multipurpose infrastru cture") is less clear. Germany therefore kindly suggests to c larify the linkages between the components and to elaborat e as to how they work together to coherently contribute to t he project's objective.	To strengthen the coherence between the outcomes and t o avoid overlapping with the NAP-GCF project, outcomes 1 and 3 were revised and now focus exclusively on the wa ter sector. Consequently, the activities carried out under o utcome 2, with the introduction of water infrastructures fo r drinking and agriculture, are providing very relevant lesso ns learned for the strengthening of the water adaptation fr amework.
Germany welcomes the PIF's objective of mass disseminati on of economically sustainable hybrid village water system s and multipurpose infrastructure. It would be favorable to highlight the various socio-economic benefits that could be achieved. While effective water resource management is ke y, the PIF falls short in mentioning the impacts of climate c hange on the targeted communities and households, and h ow the foreseen measures are to address them. Germany t herefore strongly recommends to highlight adaptation aspe cts, and to specify how the resources will be used in more d etail under component 2).	In-depth details about the vulnerability of the targeted site s were provided in the Development Challenge section an d under outcome 2 (without LDCF intervention). In additio n, the Prodoc offers details on how the activities to be con ducted will provide adaptation benefits under the section "IV. Results and Partnerships".
Germany welcomes the PIF's alignment with Niger's nation al priorities, as outlined in national strategies and plans i.a. PDES (Economic and Social Development Plan). Given that the institutional and strategic framework have evolved in th	The relevant policies and plans were updated in the Prodo c to address the changes in the political context in Niger o ver the last years since the PIF submission. This was don e through a desk review from the formulation team (intern

e past two years and taking into account the international d evelopments since, Germany kindly recommends to a) upd ate the linkages to development plans; b) update progress under the NAP process; c) include a reference to Niger's ND C.	ational and national consultants) as well as meetings with a large range of stakeholders. This update was also appro ved by national actors during the validation workshop held in August 2018. The NAP process has also been largely di scussed in the Prodoc, in particular with the strong linkag es that were established with the NAP-GCF project. As for the NDC, a mention was made in the Prodoc and the proje ct is well aligned with identified adaptation priorities.
In addition, Germany would like to mention that two progra mmes funded by the German government, might be to overl ap with some of the proposed activities: a. "Programme for rural development and productive agriculture: promotion of productive agriculture (PROMAP)" (2016-2018), implement ed by the Deutsche Gesellschaft für Internationale Zusamm enarbeit (GIZ) GmbH on behalf of Federal Ministry for Econ omic Cooperation and Development (BMZ), especially with a view to component 2). b. "Promotion de la Petite Irrigatio n et de la Sécurité Alimentaire - PISA" (20152019), impleme nted by Kreditanstalt für Wiederaufbau (KfW), especially wit h a view to component 2).	Both projects were included in the Prodoc and CEO-ER to ensure the activities are coordinated during implementati on.

ANNEX C: STATUS OF IMPLEMENTATION OF PROJECT PREPARATION ACTIVITIES AND THE USE OF FUNDS.

A. Provide detailed funding amount of the PPG activities financing status in the table below:

PPG Grant Approved at PIF: 150,000

Project Preparation Activities Implemented	*GETF/LDCF/SCCF/CBIT Amount ($)*		
	Budgeted Amount	*Amount Spent To date*	*Amount Committed*
Technical assistance (design technical elements as well as all the required financial and administrative components of the project)	86,950.00	27,475.26	59,474.74
Conducting missions to the project sites	36,050.00	5,923.43	30,126.57
Stakeholder consultation and validation workshop	27,000.00	1,413.70	25,586.30
Total	150,000	34,812.39	115,187.61

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

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

N/A

ANNEX E: GEF 7 Core Indicator Worksheet

Use this Worksheet to compute those indicator values as required in Part I, Table G to the extent applicable to your proposed project. Progress in programming against these targets for the program will be aggregated and reported at any time during the replenishment period. There is no need to complete this table for climate adaptation projects financed solely through LDCF and SCCF.

ANNEX: Project Taxonomy Worksheet

Use this Worksheet to list down the taxonomic information required under Part1 by ticking the most relevant keywords/topics//themes that best describes the project

GEF 7 TAXONOMY **Annex C**

Please identify the taxonomic information required in Part I, Item G by ticking the most relevant keywords/ topics/themes that best describe the project.

Level 1	Level 2	Level 3	Level 4
☑ Influencing models			
	☐ Transform policy and		

	regulatory environments		
	☒ Strengthen institutional capacity and decision-making		
	☒ Convene multi-stakeholder alliances		
	☐ Demonstrate innovative approaches		
	☐ Deploy innovative financial instruments		
☒ Stakeholders			
	☐ Indigenous Peoples		
	☒ Private Sector		
		☐ Capital providers	
		☐ Financial intermediaries and market facilitators	
		☐ Large corporations	
		☐ SMEs	
		☒ Individuals/Entrepreneurs	
		☐ Non-Grant Pilot	
		☐ Project Reflow	
	☒ Beneficiaries		
	☒ Local Communities		
	☒ Civil Society		
		☒ Community Based Organization	
		☒ Non-Governmental Organization	
		☐ Academia	
		☐ Trade Unions and Workers Unions	
	☒ Type of Engagement		
		☒ Information Dissemination	
		☐ Partnership	
		☒ Consultation	
		☒ Participation	
	☒ Communications		
		☒ Awareness Raising	
		☒ Education	
		☐ Public Campaigns	
		☒ Behavior Change	
☒ Capacity, Knowledge and Research			
	☒ Enabling Activities		
	☒ Capacity Development		
	☒ Knowledge Generation and Exchange		
	☐ Targeted Research		
	☒ Learning		
		☐ Theory of Change	
		☒ Adaptive Management	
		☒ Indicators to Measure Change	
	☐ Innovation		
	☒ Knowledge and Learning		
		☒ Knowledge Management	
		☐ Innovation	
		☒ Capacity Development	

GEF 7 Taxonomy July 2018

		☐ Learning	
	☒ Stakeholder Engagement Plan		
☒ Gender Equality			

☒ Gender Equality			
	☒ Gender Mainstreaming		
		☒ Beneficiaries	
		☒ Women groups	
		☒ Sex-disaggregated indicators	
		☒ Gender-sensitive indicators	
	☒ Gender results areas		
		☒ Access and control over natural resources	
		☒ Participation and leadership	
		☐ Access to benefits and services	
		☒ Capacity development	
		☒ Awareness raising	
		☒ Knowledge generation	
☐ Focal Areas/Theme			
	☐ Integrated Programs		
		☐ Commodity Supply Chains (`Good Growth Partnership)	
			☐ Sustainable Commodities Production
			☐ Deforestation-free Sourcing
			☐ Financial Screening Tools
			☐ High Conservation Value Forests
			☐ High Carbon Stocks Forests
			☐ Soybean Supply Chain
			☐ Oil Palm Supply Chain
			☐ Beef Supply Chain
			☐ Smallholder Farmers
			☐ Adaptive Management
		☐ Food Security in Sub-Sahara Africa	
			☐ Resilience (climate and shocks)
			☐ Sustainable Production Systems
			☐ Agroecosystems
			☐ Land and Soil Health
			☐ Diversified Farming
			☐ Integrated Land and Water Management
			☐ Smallholder Farming
			☐ Small and Medium Enterprises
			☐ Crop Genetic Diversity
			☐ Food Value Chains
			☐ Gender Dimensions
			☐ Multi-stakeholder Platforms
		☐ Food Systems, Land Use and Restoration	
			☐ Sustainable Food Systems
			☐ Landscape Restoration
			☐ Sustainable Commodity Production
			☐ Comprehensive Land Use Planning
			☐ Integrated Landscapes
			☐ Food Value Chains
			☐ Deforestation-free Sourcing
			☐ Smallholder Farmers
		☐ Sustainable Cities	
			☐ Integrated urban planning

1

GEF 7 Taxonomy July 2018

			☐ Urban sustainability framework
			☐ Transport and Mobility
			☐ Buildings
			☐ Municipal waste management
			☐ Green space
			☐ Urban Biodiversity
			☐ Urban Food Systems
			☐ Energy efficiency
			☐ Municipal Financing
			☐ Global Platform for Sustainable Cities
			☐ Urban Resilience
	☐ **Biodiversity**		
		☐ Protected Areas and Landscapes	
			☐ Terrestrial Protected Areas
			☐ Coastal and Marine Protected Areas
			☐ Productive Landscapes
			☐ Productive Seascapes
			☐ Community Based Natural Resource Management
		☐ Mainstreaming	
			☐ Extractive Industries (oil, gas, mining)
			☐ Forestry (Including HCVF and REDD+)
			☐ Tourism
			☐ Agriculture & agrobiodiversity
			☐ Fisheries
			☐ Infrastructure
			☐ Certification (National Standards)
			☐ Certification (International Standards)
		☐ Species	
			☐ Illegal Wildlife Trade
			☐ Threatened Species
			☐ Wildlife for Sustainable Development
			☐ Crop Wild Relatives
			☐ Plant Genetic Resources
			☐ Animal Genetic Resources
			☐ Livestock Wild Relatives
			☐ Invasive Alien Species (IAS)
		☐ Biomes	
			☐ Mangroves
			☐ Coral Reefs
			☐ Sea Grasses
			☐ Wetlands
			☐ Rivers
			☐ Lakes
			☐ Tropical Rain Forests
			☐ Tropical Dry Forests
			☐ Temperate Forests
			☐ Grasslands
			☐ Paramo
			☐ Desert
		☐ Financial and Accounting	
			☐ Payment for Ecosystem Services
			☐ Natural Capital Assessment and Accounting
			☐ Conservation Trust Funds
			☐ Conservation Finance

		☐ Supplementary Protocol to the CBD	
			☐ Biosafety
			☐ Access to Genetic Resources Benefit Sharing
	☐ **Forests**		
		☐ Forest and Landscape Restoration	
			☐ REDD/REDD+
		☐ Forest	
			☐ Amazon
			☐ Congo
			☐ Drylands
	☐ **Land Degradation**		
		☐ Sustainable Land Management	
			☐ Restoration and Rehabilitation of Degraded Lands
			☐ Ecosystem Approach
			☐ Integrated and Cross-sectoral approach
			☐ Community-Based NRM
			☐ Sustainable Livelihoods
			☐ Income Generating Activities
			☐ Sustainable Agriculture
			☐ Sustainable Pasture Management
			☐ Sustainable Forest/Woodland Management
			☐ Improved Soil and Water Management Techniques
			☐ Sustainable Fire Management
			☐ Drought Mitigation/Early Warning
		☐ Land Degradation Neutrality	
			☐ Land Productivity
			☐ Land Cover and Land cover change
			☐ Carbon stocks above or below ground
		☐ Food Security	
	☐ **International Waters**		
		☐ Ship	
		☐ Coastal	
		☐ Freshwater	
			☐ Aquifer
			☐ River Basin
			☐ Lake Basin
		☐ Learning	
		☐ Fisheries	
		☐ Persistent toxic substances	
		☐ SIDS : Small Island Dev States	
		☐ Targeted Research	
		☐ Pollution	
			☐ Persistent toxic substances
			☐ Plastics
			☐ Nutrient pollution from all sectors except wastewater
			☐ Nutrient pollution from Wastewater
		☐ Transboundary Diagnostic Analysis and Strategic Action Plan preparation	
		☐ Strategic Action Plan	

		Implementation	
		☐ Areas Beyond National Jurisdiction	
		☐ Large Marine Ecosystems	
		☐ Private Sector	

GEF 7 Taxonomy July 2018

		☐ Aquaculture	
		☐ Marine Protected Area	
		☐ Biomes	
			☐ Mangrove
			☐ Coral Reefs
			☐ Seagrasses
			☐ Polar Ecosystems
			☐ Constructed Wetlands
	☐ **Chemicals and Waste**		
		☐ Mercury	
		☐ Artisanal and Scale Gold Mining	
		☐ Coal Fired Power Plants	
		☐ Coal Fired Industrial Boilers	
		☐ Cement	
		☐ Non-Ferrous Metals Production	
		☐ Ozone	
		☐ Persistent Organic Pollutants	
		☐ Unintentional Persistent Organic Pollutants	
		☐ Sound Management of chemicals and Waste	
		☐ Waste Management	
			☐ Hazardous Waste Management
			☐ Industrial Waste
			☐ e-Waste
		☐ Emissions	
		☐ Disposal	
		☐ New Persistent Organic Pollutants	
		☐ Polychlorinated Biphenyls	
		☐ Plastics	
		☐ Eco-Efficiency	
		☐ Pesticides	
		☐ DDT - Vector Management	
		☐ DDT - Other	
		☐ Industrial Emissions	
		☐ Open Burning	
		☐ Best Available Technology / Best Environmental Practices	
		☐ Green Chemistry	
	☒ **Climate Change**		
		☒ **Climate Change Adaptation**	
			☐ Climate Finance
			☒ Least Developed Countries
			☐ Small Island Developing States
			☐ Disaster Risk Management
			☐ Sea-level rise
			☒ Climate Resilience
			☐ Climate information
			☐ Ecosystem-based Adaptation
			☐ Adaptation Tech Transfer
			☐ National Adaptation Programme of Action
			☒ National Adaptation Plan

			☒ Mainstreaming Adaptation
			☒ Private Sector
			☒ Innovation
			☐ Complementarity
			☒ Community-based Adaptation
			☒ Livelihoods
		☐ **Climate Change Mitigation**	
			☐ Agriculture, Forestry, and other Land Use
			☐ Energy Efficiency

			☐ Sustainable Urban Systems and Transport
			☐ Technology Transfer
			☐ Renewable Energy
			☐ Financing
			☐ Enabling Activities
		☐ **Technology Transfer**	
			☐ Poznan Strategic Programme on Technology Transfer
			☐ Climate Technology Centre & Network (CTCN)
			☐ Endogenous technology
			☐ Technology Needs Assessment
			☐ Adaptation Tech Transfer
		☐ **United Nations Framework on Climate Change**	
			☐ Nationally Determined Contribution
		☐ **Climate Finance (Rio Markers)**	☐ Paris Agreement ☐ Sustainable Development Goals ☐ Climate Change Mitigation 1 ☐ Climate Change Mitigation 2 ☐ Climate Change Adaptation 1 ☐ Climate Change Adaptation 2

United Nations Development Programme

Project Document for nationally implemented projects financed by the GEF/LDCF/SCCF Trust Funds

Project title: Planning and Financing for Climate Change Adaptation (CCA) in Niger		
Country: Niger	**Implementing Partner: Secrétariat Exécutif du** *Conseil national pour l'environnement et le développement durable* (SE/CNEDD)	**Management Arrangements :** National Implementation Modality (NIM)
UNDAF/Country Programme Outcome 2: By 2018, supported national, regional and local institutions benefit from disaster risk management, prevention, environmental management, and food security **Output 2.2:** National, regional, and local institutions have increased capacities to be more resilient to climate change and to manage food insecurity crisis and other natural disasters		
UNDP Strategic Plan 2018-2021: Signature solution 3: Enhance national prevention and recovery capacities for resilient societies		
UNDP Social and Environmental Screening Category: *Low*	**UNDP Gender Marker:** 2	
Atlas Project ID/Award ID number: 00113127	**Atlas Output ID/Project ID number:** 00111438	
UNDP-GEF PIMS ID number: 5336	**GEF ID number:** 8020	
Planned start date: June 2020	**Planned end date:** May 2025	
LPAC date: TBD		

Brief project description

Water resources are one of the most vital aspects of Niger's rural economy and are among the natural resources most affected by climate change. Using evidence from flow indices of the Niger River in Niamey, Komadougou Yobé in Bagara, and Goulbi de Maradi in Nielloua, research has shown a 34% decrease in the annual flows between 1969 and 1994 and an overall reduction of more than 70% in minimum daily flows. The current situation of Niger's water resources poses a worrying threat for the country. As a result, the national government has taken steps to address environmental degradation since the 1990s, including through the creation of the Environmental National Council for Sustainable Development (CNEDD), and the integration of climate change in multiple national plans and strategies for the water sector. Furthermore, the National Adaptation Plan (NAP) process started in 2014 with the support of UNDP. It is now urgent for the country to take radical action in the water sector considering the challenges increasing water scarcity and floods are posing in the context of climate change. Despite governmental efforts, there are still gaps remaining in the water sector. These include (i) an information and assessment gap in the identification of causes and impacts of climate change, and (ii) a policy and implementation gap to tackle the water scarcity and drought challenges especially due to a historical lack of adequate policy response and governance in this sector.

The objective of the proposed LDCF project is to support vulnerable populations, as well as national and local authorities, to strengthen their resilience to climate risks and vulnerability, with a particular focus on planning and implementing climate change adaptation in the water sector.

Three main outcomes are planned as follows: (i) strengthening the capacity of national institutions and communities in planning and budgeting for climate change adaptation in the water sector which includes using opportunities created by a water market to strengthen local adaptation and resilience in Niger; (ii) promoting the widespread dissemination of economically sustainable hybrid village water systems and multipurpose infrastructure, to transform water access into income-generating opportunities and to increase disaster preparedness; and (iii) developing an evidence-based knowledge system to inform adaptation policies and investments linked to the water sector.

The SE/CNEDD will implement the project over a period of five years both at the national level (outcomes 1 and 3) and in the local communities in Tenhiya, (Zinder region), Tabalak, Kao, Tchintabaraden, and Takanamat (Tahoua region) and Ouallam and Tindikiwindi, (Tillabéry region) (outcome 2).

FINANCING PLAN	
GEF Trust Fund *or LDCF or SCCF or other vertical funds*	US$ 8,925,000
UNDP TRAC resources	US$ 500,000
(1) **Total Budget administered by UNDP**	**US$ 9,425,000**
PARALLEL CO-FINANCING (*all other co-financing that is not cash co-financing administered by UNDP)*	
CNEDD	US$ 3,300,000

UNDP GCF NAP project	US$ 2,667,282
Ministère de l'Hydraulique et de l'Environnement	US$ 25,400,000
(2) **Total co-financing**	**US$ 31,367,282**
(3) **Grand-Total Project Financing (1)+(2)**	**US$ 40,792,282**

SIGNATURES		
Signature: print name below	**Agreed by Government**	**Date/Month/Year:**
Signature: print name below	**Agreed by Implementing Partner**	**Date/Month/Year:**
Signature: print name below	**Agreed by UNDP**	**Date/Month/Year:**

Table of Contents

I. LIST OF ACRONYMS 5
II. DEVELOPMENT CHALLENGE 8
III. STRATEGY 17
IV. RESULTS AND PARTNERSHIPS 21
V. PROJECT MANAGEMENT 48
VI. PROJECT RESULTS FRAMEWORK 52
VII. MONITORING AND EVALUATION (M&E) PLAN 56
VIII. GOVERNANCE AND MANAGEMENT ARRANGEMENTS 61
IX. FINANCIAL PLANNING AND MANAGEMENT 66
X. TOTAL BUDGET AND WORK PLAN 68
XI. LEGAL CONTEXT 77
XII. Risk management 78
XIII. MANDATORY ANNEXES 82

LIST OF FIGURES

Figure 1: Observed and projected change in June–September rainfall and temperature for 1960-2039 for Niger 10
Figure 2: Food insecurity in December 2017: vulnerable zones 11
Figure 3: NAP Process timeline ..... **Error! Bookmark not defined.**
Figure 4: Problems Tree 16
Figure 5: Problem and Solution Trees – Theory of Change ..... **Error! Bookmark not defined.**
Figure 6: Project Organization Structure 62

LIST OF TABLES

Table 1 : Targeted municipalities ..... **Error! Bookmark not defined.**
Table 2: Matrix of stakeholders' participation 44
Table 3: Project risks 50
Table 4: Project Results Framework 55
Table 5: GEF M&E Requirements 60
Table 6: Parallel co-financing 66
Table 7: General budget of the project 70
Table 8: Budget Notes 70
Table 9: Summary of Funds 76

I. LIST OF ACRONYMS

ACMAD	African Centre of Meteorological Application for Development
AEPS	*Adduction d'Eau Potable Simplifiée*
AFD	*Agence Française de Développement*
AfDB	African Development Bank
AGRHYMET	*Centre Régional de Formation et d'Application en AgroMétéorologie et en Hydrologie Opérationnelle*
AMCC	*Alliance Mondiale contre le Changement Climatique*
ANADIA	*Adaptation Au changement climatique, prévention des catastrophes et Développement agricole pour la sécurité Alimentaire*
AR5	Fifth Assessment Report of the IPCC
AWP	Annual Work Plan
CBA	Community Based Adaptation
CCA	Climate Change Adaptation
CBO	Community Based Organization
CEDAW	Convention on the Elimination of All Forms of Discrimination against Women
CILSS	*Comité permanent Inter-États de Lutte contre la Sécheresse au Sahel*
CNEDD	*Conseil National pour l'Environnement et le Développement Durable*
CNI	Initial National Communication to the UNFCCC
CO	Country Office
CO_2	Carbon dioxide
CO_2e	Carbon dioxide equivalent
COP	Conference of the Parties
CSA	Climate-smart agriculture
CSO	Civil Society Organization
DGRE	*Direction Générale des Ressources en Eau*
DMN	National Meteorology Directorate
EIB	European Investment Bank
EMIG	*Ecole des Mines du Nige*r
ENAM	*Ecole National d'Administration et de Magistrature*
EU	European Union
FAST	*Faculté des Sciences et des Techniques*
GCF	Green Climate Fund
GCM	Global Circulation Models
GDP	Gross Domestic Product
GEF	Global Environment Facility
GHG	Greenhouse Gas

GIZ	*Deutsche Gesellschaft für Internationale Zusammenarbeit*
GoN	Government of Niger
ha	hectare
IDCC	Intégration de la Dimension Changement Climatique
IEO	Independent Evaluation Office
I3N	Initiative 3N "*le Niger Nourrit les Nigériens*"
IFC	International Finance Corporation
INDC	Intended Nationally Determined Contribution
IPCC	Intergovernmental Panel on Climate Change
IWRM	Integrated Water Resource Management
LDC	Least Developed Countries
LDCF	Least Developed Countries Fund
LEG	Least Developed Country Expert Group
MAG/EL	Ministry of Agriculture and Livestock
MDC/AT	Ministry of Community Development and Land Use Planning
ME/DD	Ministry of Environment and Sustainable Development
MH/A	Ministry of Water and Sanitation
MPF/PE	Ministry of Child Protection and Advancement of Women
M&E	Monitoring and Evaluation
NAP	National Adaptation Plan
NAPA	National Adaptation Programme of Action
NGO	Non-Governmental Organisation
NIM	National Implementation Modality
OCHA	United Nations Office for the Coordination of Humanitarian Affairs
PAC	Community Action Plan for Climate Resilience
PANGIRE	*Plan d'Action National de Gestion Intégrée des Ressources en Eau*
PARC-DAD	*Projet d'appui à la résilience climatique pour un développement agricole durable au Niger*
PDC	*Plan de Développement Communal*
PDES	*Plan de Développement Economique et Social*
PDIPC	*Projet de Développement de l'Information et de la Prospective Climatiques*
PIF	Project Identification Form
PIR	Project Implementation Review
PLEA	Local Water and Sanitation Plans
PMU	Project Management Unit
PNAEPA	National Rural Drinking Water Supply and Sanitation Programme
PNEDD	National Environmental Plan for a Sustainable Development
PRS	Poverty Reducation Strategy

POPP	Programme and Operations Policies and Procedures
PPG	Project Preparation Grant
PPP	Public Private Partnership
PPCR	Pilot Program for Climate Resilience
PROMOVARE	Water Resources Mobilization and Development Project
QPR	Quarterly Progress Report
RCU	Regional Coordination Unit
SDR	*Stratégie de Développement Rural*/Rural Development Strategy
RGPH	*Recensement Général de la Population et de l'Habitat*
SBAA	Standard Basic Assistance Agreement
SC	Steering Committee
SDDCI	*Stratégie de Développement Durable et de Croissance Inclusive*
SDG	Sustainable Development Goals
SE/CNEDD	Secrétariat Exécutif du CNEDD
SME	Small and medium-sized enterprises
SEEN	*Société d'Exploitation des Eaux du Niger*
SNDI/CER	*Stratégie Nationale de Développement de l'Irrigation et de la Collecte des Eaux de. Ruissellement*
SNPA/ANCR	National Strategy and Action Plan for the Management of the Global Environment
SNPA/CVC	National Strategy and Action Plan for Climate Change and Variabilities
SSTrC	South South and Triangular Cooperation
SWC	Soil and Water Conservation
TNC	Third National Communication on Climate Change
UNDAF	United Nations Development Assistance Framework
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change
US$	US dollar
VRA	Vulnerability and risk assessment
WB	World Bank

II. DEVELOPMENT CHALLENGE

II.1 Climate change and water resources challenges

1. With a Gross Domestic Product (GDP) per capita of US$ 364 in 2016[1] and one of the lowest Human Development Index (HDI) rankings (rank 187 out of 188 in 2016)[2], Niger stands poorly in terms of economic and human development.

2. Administratively, Niger is divided into 7 regions (Agadez, Diffa, Dosso, Maradi, Tahoua, Tillabéri, and Zinder) and one capital district (Niamey)[3].

3. The country is constituted of four climatic areas: the Sahelo Sudanese zone, which receives 600 to 800 mm of rainfall per year on average; the Sahelian zone, which receives 300 to 600 mm of rainfall per year on average; the Sahelo Saharan zone, which receives 150 mm to 300 mm of rainfall per year on average and the Saharan desert zone, which represents 77% of the country and receives less than 150 mm of rainfall per year on average [4].

4. The hydraulic system of Niger consists of a main river, the eponymous *fleuve Niger*, and a smaller river called Komadougou Yobe. Niger water resources have suffered from the consequences of multiple droughts over the last forty years[5]. The vulnerability of surface water resources to climatic variability has been demonstrated, using flow indices from the Niger River in Niamey, from Komadougou Yobe to Bagara. From 1969 to 1994, there was a 34% decrease in the annual Niger River flows and a decrease of more than 70% in minimum daily flows. The strength of the runoff flow during torrential rains considerably erodes the soil. These runoff waters carry large amounts of sand in the river beds, resulting in the silting of rivers[6]. By comparing pluviometric and temperature data from 59 stations from 1961 to 2004, the 2006 National Adaptation Programme for Actions (NAPA)[7] attributed these abnormal fluctuations to climate change.

5. Climate projections reported in the Fifth Assessment Report (AR5)[8] of the Intergovernmental Panel on Climate Change (IPCC) show that Africa's temperatures are expected to increase by 3-4°C on average across the continent[9] during this century and that this regional trend will be more extreme than the global mean temperature increase. The abnormality of the temperature trends in Western Africa in recent decades was reiterated in the AR5: "Over West Africa and the Sahel near surface temperatures have increased over the last 50 years"[10].

6. In addition, Global Circulation Models (GCMs) under RCP4.5 to RCP8.5 indicate that mean annual temperature in the Sahel will continue to increase by 2 to 6° C within the next hundred years as a consequence of climate change[11]. In Niger, the study conducted under the Third National Communication (TNC) concludes that the country will experience a temperature increase ranging from 2.5

[5] https://www.meteo-niger.org/content.php?page=149
[6] Mahamadou Bachir Altiné, 2017. Report on water resources in Niger. Report prepared by the national consultant under the PPG.
[7] http://unfccc.int/resource/docs/napa/ner01e.pdf
[8] https://www.ipcc.ch/report/ar5/
[9] Under the A1B scenario i.e. projected atmospheric carbon dioxide concentration of 850 parts per million in 2100. This prediction is based on a future world of very rapid economic growth, global population that peaks in mid-century and declines thereafter, and the rapid introduction of new and more efficient technologies, with a balance of fossil intensive and non-fossil energy sources.
[10] https://www.ipcc.ch/pdf/assessment-report/ar5/wg2/WGIIAR5-Chap22_FINAL.pdf page 1206
[11] Hulme, M, RM Doherty, T Ngara, MG New, and D Lister. 2001. African climate change: 1900-2100. Climate Research 17:145-168

to 3°C in the next fifty years, mostly due to human-induced climate change[12]. This will result in continuously greater rate of evapotranspiration, causing a reduction in the amount of water available for cultivation, livestock rearing, and human consumption. Inadequate water supplies prevent farmers from continuing normal production practices, which further threatens food security in vulnerable areas due to the high rate of subsistence farming[13].

7. Rainfall in Niger declined rapidly between 1950 and the mid-1980s and partially recovered during the 1990s and 2000s with the average rainfall in Niger's crop-growing districts only 8% lower between 2000 and 2009 than the 1920–1969 mean (see figure 1). However, the pluviometric evolution demonstrates that, over the past three decades, rainfalls became increasingly unreliable, both inter-annually and during a particular season. For instance, while the average rainfall calculated over 51 years amounts to 301.2 mm, 2011 was particularly marked by a severe drop in annual precipitation (111.2 mm, the smallest amount of rain ever recorded over the entire observation period)[14]. In addition, the dry season duration increased from 50 days to 4 months. Niger receives most of its rain between June and September, with aggregated precipitation usually amounting to above 500 millimeters (mm), providing enough water for crops and livestock[15].

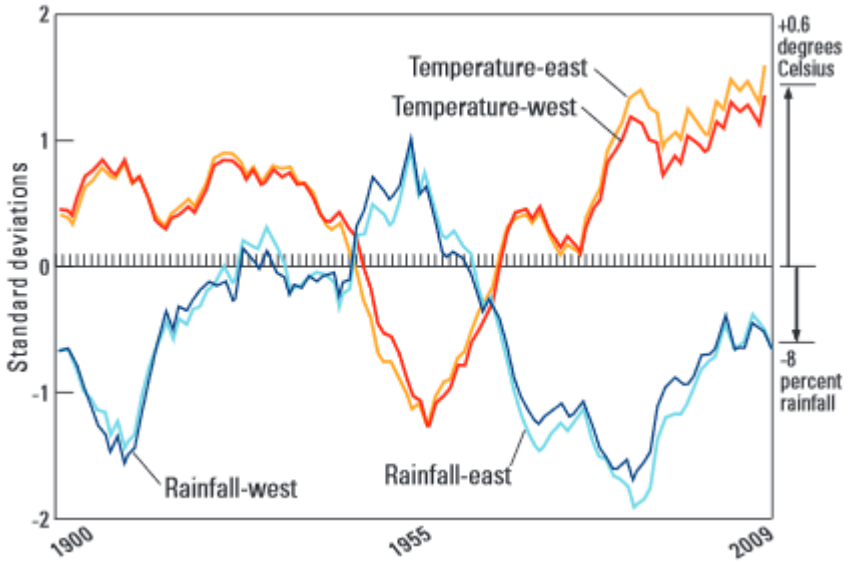


Figure 1. Observed standard deviation of rainfall and air temperature for eastern and western Niger during the rainy season (June-September) from 1900 to 2009 based on mean for the 1920–69 time period [16].

[12] https://unfccc.int/sites/default/files/resource/nernc3.pdf
[13] http://www.fao.org/countryprofiles/index/en/?iso3=NER
[14] https://www.meteo-niger.org
[15] https://www.meteo-niger.org
[16] USAID, 2012, https://pubs.usgs.gov/fs/2012/3080/fs2012-3080.pdf

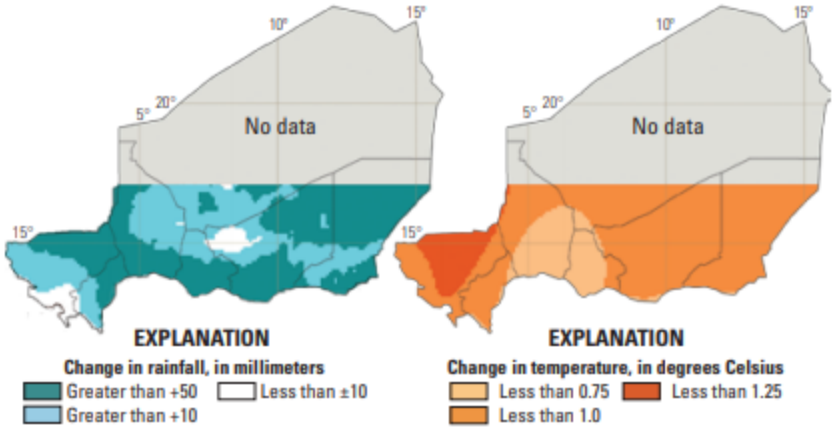


Figure 2: Projected changes in June–September rainfall and temperature for 1960-2039 for Niger[17]

8. The latest extreme weather events in Niger have increased awareness concerning the urgency of the situation, with either severe droughts or flash floods[18,19]. According to a November 2017 statement from the Office for the Coordination of Humanitarian Affairs (OCHA), "Niger continues to grapple with insecurity, climatic shocks, extreme poverty and lack of basic services and infrastructure. The humanitarian crisis is worsening, with multiple crises in Diffa, Tillabery and Tahoua […]. The number of people in need has reached 2.3 million, an increase of 400,000 during 2017. The analysis of the needs shows the persistence of five major components: food insecurity, malnutrition, epidemics, floods and population movements"[20]. In the central regions of Maradi and Zinder, Agadez in the north and Tahoua in the west, at least 33 000 farmers' schoolchildren dropped out of school to follow their families in search for better pastures in 2017[21].

9. Water resources in particular are strongly affected by the consequences of climate change impacts, with direct consequences on agriculture, especially with the flooding of arable land, a delay in rainfall, and an abrupt cessation at the critical point when the crops require rain. The agricultural sector is also confronted with the transformation of arable soils into desert, with losses of fertility, sand invasion and saline intrusion[22]. Drought- and flood-affected populations suffer from poor agricultural yields, increasing food insecurity, water shortages, displacement, and paucity.

[17] USAID, 2012, https://pubs.usgs.gov/fs/2012/3080/fs2012-3080.pdf
[18] https://www.unocha.org/legacy/niger/a-propos-d-ocha-niger/profils-regionaux
[19] https://reliefweb.int/sites/reliefweb.int/files/resources/flash_inondations_publication_2.pdf
[20] https://www.unocha.org/legacy/top-stories/all-stories/niger-2018-humanitarian-needs-overview-identifies-23m-people-critical-need
[21] https://reliefweb.int/sites/reliefweb.int/files/resources/NER_BIH_JANFEV_2017.pdf
[22] S. Tacko Kandji, L. Verchot, J. Mackensen, 2006. Climate Change and Variability in the Sahel Region: Impacts and Adaptation Strategies in the Agricultural Sector. Word Agroforestry Centre (ICRAF) & United Nations Environment Programme (UNEP)

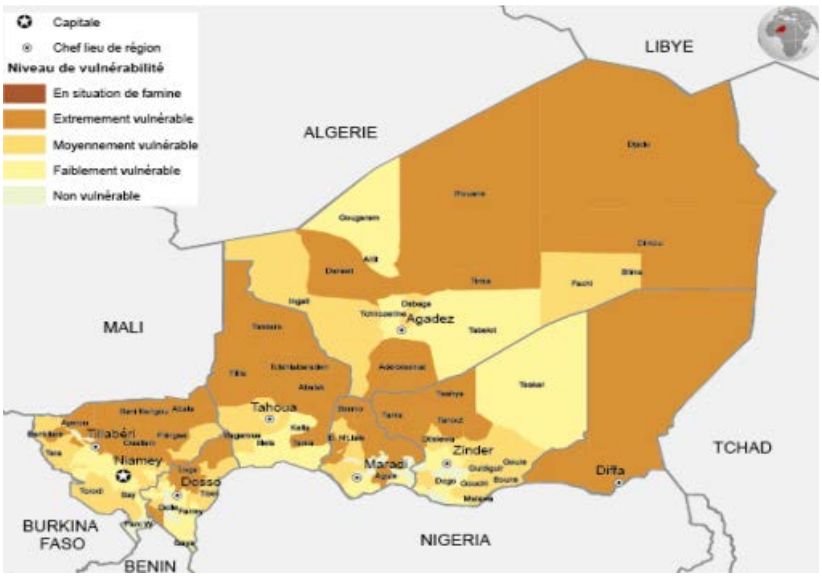


Figure 3: Food insecurity in December 2017: vulnerable zones[23]

10. The main anticipated effects of climate change in Niger, due to the unreliability of water access, caused by temperature increase and rainfall uncertainties, are expected to be an overall reduction of food supply and incomes in the agricultural sector, increasing the incidence of malnutrition, famine and poverty in the country. Flooding will also further damages housing and crop fields, triggering the degradation of plant cover, the development of *koris*[24] or silting of market gardeners[25].

II.2 Climate change challenges in the targeted sites

11. Rural areas are particularly vulnerable to climate change. While the project's components 1 and 3 have a nation-wide geographic scope of intervention and application, as they target national-level institutional and research mechanisms, component 2 is targeting the most vulnerable communities in the communes, as identified in the NAPA. These communes located in the regions of Zinder, Tahoua, and Tillabery, are the following ones: Tenhiya, Kao, Takanammatt, Tchintabaraden, Tabalak, Ouallam, Tondikiwindi.

[23] https://reliefweb.int/sites/reliefweb.int/files/resources/Bulletin%20d%27information%20humanitaire%20janvier%202018.pdf
[24] Kori iis a temporary watercourse caused by the flooding of ponds.They are usually transporting a significant amount of water and solids (including sand), and are responsible for erosion. Their soils are hydromorphic, which gives them the swampy character favourable to market gardening and arboriculture..
[25] Contribution du Consultant Génie Rural, Djibo Niandou, Novembre 2017, Projet : ''Planification et Financement de l'Adaptation aux changements climatiques, cas du Niger'' See annex K

Figure 4: Niger Administrative Regions[26]

12. In the rural communes of Tenhiya (region of Zinder), the communes of Tabalak, Kao, Tchintabaraden, Takanamat (region of Tahoua), as well as in the communes of Ouallam and Tindikiwindi (region of Tillabéry), climate change has severe consequences for the rural population. The variability in the annual precipitation poses major challenges and rainfalls are increasingly erratic, irregular and poorly distributed in time and space. The main activities of the populations, which are farming, agriculture, livestock, trade, crafts and fishing, are suffering from drought episodes. Consequently, vulnerable populations often do not have sufficient access to water for agriculture and drinking.

13. In the communes of Tenhiya, Takanamat, Tchintabaraden, and Kao, the progressive and accentuated silting of the beds of the water bodies and shallow waters, caused by the solid flows carried by the runoff of water collected by the *koris*, is impacting water access for the surrounding population. In Tabalak, the weak capacity of the commune to cope with threats to the pond, as well as the existence of practices that pollute the pond threaten biodiversity. This is also explained by the mis- and uncontrolled use of pesticides and herbicides. In this site, an increasing number of *koris* claws was observed. In the rural communes of Ouallam and Tondiwikindi, a small mesh of modern water points (cemented wells) do exist in order to respond to the needs of livestock (mainly large ruminants such as beef or dromedaries). But again, climate change is affecting these water points, through a decrease in water flows and a progressive silting of the wells.

14. The table below summarizes information on water access in the targeted sites and their vulnerability to climate change, which is the basis for their selection and their prioritization under the NAPA. Indicative villages were identified based on their estimated rate of access to safe and secured water resources, with a focus on villages with less than 25% access rate. Due to the rapid changes in water access vulnerability, the villages will be reexamined during the starting phase of the project, through discussions with the commune authorities and local populations:

[26] Source: http://www.freemapviewer.com/en/map/Map-World_1407.html

Communes *Villages*	**Water access**	**Climate Change vulnerability**
Tenhiya *Abdounézé* *Tiggart*	- 252 temporary ponds, - 2 semi-permanent ponds - 1 deep underground reservoir - 34 modern cement wells - 386 traditional wells - 1 Pastoral Pumping Station (SPP) - 1 Human Motor Pump (PMH)	Teniya is threatened by dry spells, floods, late start and early end of the rainy season. The most vulnerable resource is surface water, becoming scarcer, especially the Abdounézé pond, which is the biggest pond in the commune. In addition, the koris of the region that feed the pond, also transport solid waste from the village to the pond. Temporary streams are also threatened by bank erosion, which contributes to the transport of sand and silting of ponds.
Takanamat *Magia*	- 3 main permanent ponds: Tapkin, Zaki and Maïsabarou - Several semi permanent and temporary ponds used most of the time to water the cheptel. - 23 wells cemented including 3 non-functional; - 2 boreholes equipped, including 1 broken down in Sarou and 1 Salkadmna; - 2 small functional drinking water supply systems in Salkadamna and the capital of the commune;	Climate change is manifested by a weakness, irregularity and poor distribution of rainfall over space and time in the Takanamat commune. This makes the sustainability of water bodies and the recharge of alluvial groundwater vulnerable. In the municipality of Takanamat, the vulnerability of water resources (quality and quantity) is further threatened by the future activities of the extractive industry (Salkadamna coal mines).
Tchintabaraden *Amoulale,* *Intafouk,* *Timnokalt* *Tagalher chinfessawatane* *Wézai*	- Several semi permanent ponds - Shallow waters - 277 wells (including 104 cemented wells and 173 traditional wells) - 2 boreholes with 24 fountains, - 9 boreholes with energy source and equipment (4 mini drinking water infrastructures, 2 pumping station and 3 standpipes) - 3 wells	The meteorological data shows both a decrease in the number of rainy days and a strong inter-decadal variability in rainfall. Populations also stressed the vulnerability of surface water and alluvial slicks. In addition, the increased evaporation as well as the insufficient rainfall affects the filling of water resources and causes an accelerated drying up.
Tabalak *Tabalak*	- One permanent pond - 8 temporary ponds feed by drainage axes from the trays and dunes. - 108 cemented wells, including 4 OFEDES, and 63 in good condition, - 2 boreholes in good condition, - 1 small non-functional drinking water infrastructure, - 184 sumps including 127 in poor condition, - 90 market garden boreholes - 210 market wells.	The shortening of the rainy season: from more than 90 days in the 1960s to 80 days, and the increased occurrence of droughts and evaporation, led to a decrease in surface and deep-water resources.
Kao	- 6 natural temporary ponds (6 months per year). 3 underground reservoirs - 1 pastoral pumping station,	The analysis of the Meteorological data over 50 years shows a temperature rise and a gradual decrease in rainfall. The vulnerability of surface

Bagare jiguinawa, *Intaliwene,* *Inakankaran* *Edouk* *Kaou* *Egadé*	- 36 cement wells. - Catch basins	water resources is also linked to pollution and the extensive use of surface water for livestock and off-season cultivation. Groundwater is also threatened by pollution of the alluvial slick, through the use of pesticides and fertilizers. In addition, some wells became unusable due to high sulphate levels and very high-water hardness, including the pastoral cement well in Bagaré Jinguinawa closed for poor water quality.
Ouallam *Tinga* *Ouallam*	- 2 permanent ponds - Underground reservoirs - 83 modern wells, - 6 traditional wells, - 32 drill holes, - 6 small drinking water infrastructures, - 1 drinking water infrastructure, - 4 pastoral wells - 5 market wells.	The increased vulnerability of water resources, and occurance of floods and droughts since the 1990s can be explaned by a decrease in rainfalls, a strong interannual variability of rainfalls, and an increase in the maximum amount of daily rainfall.
Tondiwikindi *Tchizama Koira* *Tondikiwindi*	- Koris - Temporary ponds, - Semi-permanents ponds - Permanents ponds. - 254 cemented wells, with 151 in poor condition, - 110 boreholes equipped with a human powered pump - 2 small drinking water infrastructures - 2 self-contained water stations - 6 modern water points.	The vulnerability of water resources is caused by a decrease in rainfalls, a strong inter-annual and inter-decadal variability of rainfall and an increase in the maximum amount of daily rainfall, thus increasing the risk of flooding.

Table 1: Participatory stocktake of water access and analysis of climate risks and hazards in the seven municipalities. Source: PPG

II.4 The long-term solution and barriers to project achievement

15. Niger's water resource policies, as reflected in the Economic and Social Development Plan (PDES) and the National Integrated Water Resources Management Plan (PANGIRE), aim to align resource management with promoting socio-economic development, poverty alleviation, environmental preservation and improved resilience of humans and natural systems to climate change. This is expected to lead to a universal access to drinking water and sanitation by 2030. These ambitions could be compromised by risks induced by climate variability and change. The long-term solution would be to improve the integration of climate change adaptation into sectoral and local water planning and budgeting, building on proven adaptation techniques and practices for Integrated Water Resource Management (IWRM) developed under the project and identified through in-depth studies.

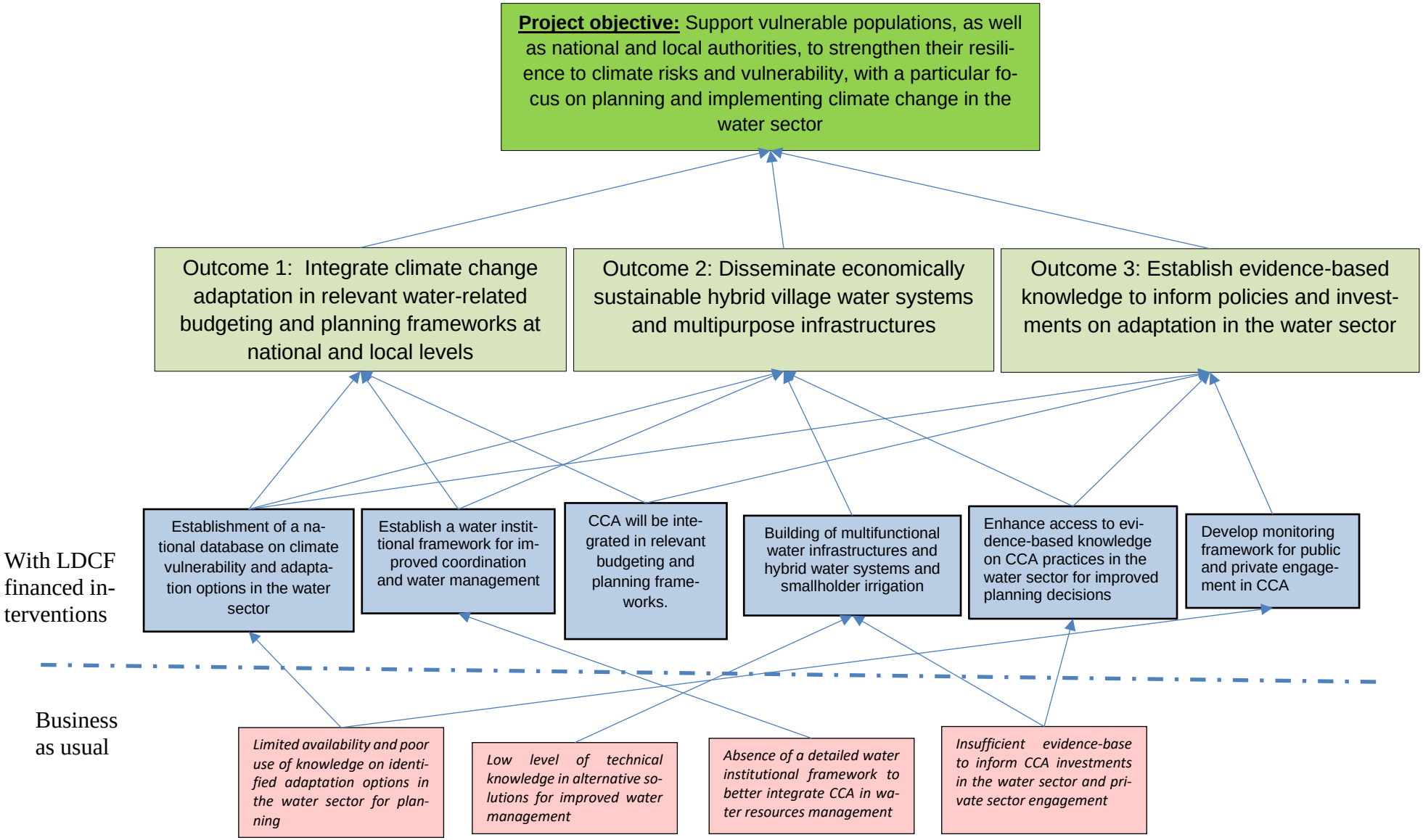
16. By taking into account the national and local baseline situations, the proposed project will enable to overcome various barriers and ultimately support the country in its efforts to be more resilient to an increasingly changing climate.

- **Barrier 1**: *Limited availability and poor management of knowledge on identified adaptation options in the water sector for planning*: There is currently no capitalization of the knowledge in this sector through a centralised national database, that would gather inputs from decision makers, local populations, the private sector and research institutes. Without scientifically-based and visible evidence of the benefits of improving climate resilience, decision-makers are not provided with relevant knowledge about successful adaptive practices. Consequently, national and local decision-makers are constrained to a limited number of replicable adaptation practices, and are not able to access a comprehensive set of data on lessons learned at the local level. This also hinders the NAP process, which necessitates detailed knowledge and information on the adaptation solutions available.
- **Barrier 2**: *Low level of technical knowledge in alternative solutions for improved water management:* At the local level, there is limited knowledge and understanding of the benefits of possible adaptation options for the improvement of water management systems in a context of climate change. This hampers the introduction of alternative solutions by smallholder farmers (ie. drip irrigation, solar/hybrid water systems), and results in limited economic development with increased rural poverty and land conflicts. Additionally, local populations have a limited understanding of the adaptation solutions to address their vulnerability to droughts and floods (ie. bank restoration), causing food and water insecurity, the destruction of crops and livestock, and the dewatering of numerous ponds.
- **Barrier 3**: *Absence of a detailed water institutional framework to better integrate CCA in water resources management*. The weakness or lack of economic and regulatory instruments (e.g. water pricing systems or efficiency targets) demonstrates the limited awareness of decision-makers about the impacts of climate change on water resources. The integration of CCA is further limited by the weakness of the coordination mechanism and capacity to mainstream CCA into national and regional ministries' staff. In addition, even though the Government of Niger already started the set up of an institutional framework for climate change, informed by various structures, agencies, and committees, the implementation is still weak, due to a lack of capacities and resources.
- **Barrier 4**: *Insufficient evidence-base to inform CCA investments in the water sector and private sector engagement*. CCA, often seen as a mid- to long-term problem, does not benefit from adequate investments in national and regional budgets, and fails to be efficiently monitored and evaluated, including with the use of climate budget lines. This therefore limits the generation and identification of CCA practices for future investments from national and local authorities, as well as the private sector.

17. The proposed project will address these barriers by (i) integrating climate change adaptation in relevant water-related budgeting and planning frameworks at national and local levels; (ii) disseminating economically sustainable hybrid village water systems and multipurpose infrastructures; and (iii) establishing evidence-based knowledge to inform policies and investments on adaptation in the water sector. The first and third component will be conducted in close synergy with the NAP GCF support project. In particular, the GCF project will "advance medium and long-term adaptation planning and budgeting in Niger[27]" to compile a NAP and facilitate its implementation, before putting in place mechanisms to ensure appropriate reporting and monitoring.

18. The project interventions are planned following a clear rationale and theory of change to tackle these barriers, by assessing assumptions and outlining causal pathways. The theory of change enables the definition of long-term goals while identifying the conditions of success.

[27] "Advancing medium and long-term adaptation planning and budgeting in Niger" Project Document, UNDP


Project objective: Support vulnerable populations, as well as national and local authorities, to strengthen their resilience to climate risks and vulnerability, with a particular focus on planning and implementing climate change in the water sector
Outcome 1: Integrate climate change adaptation in relevant water-related budgeting and planning frameworks at national and local levels
Outcome 2: Disseminate economically sustainable hybrid village water systems and multipurpose infrastructures
Outcome 3: Establish evidence-based knowledge to inform policies and investments on adaptation in the water sector
With LDCF financed interventions
Establishment of a national database on climate vulnerability and adaptation options in the water sector
Establish a water institutional framework for improved coordination and water management
CCA will be integrated in relevant budgeting and planning frameworks.
Building of multifunctional water infrastructures and hybrid water systems and smallholder irrigation
Enhance access to evidence-based knowledge on CCA practices in the water sector for improved planning decisions
Develop monitoring framework for public and private engagement in CCA
Business as usual
Limited availability and poor use of knowledge on identified adaptation options in the water sector for planning
Low level of technical knowledge in alternative solutions for improved water management
Absence of a detailed water institutional framework to better integrate CCA in water resources management
Insufficient evidence-base to inform CCA investments in the water sector and private sector engagement

III. STRATEGY

19. The objective of the project is to strengthen national/local institutions and communities' capacities in adaptation planning and budgeting while using opportunities of water market to advance local adaptation and resilience in Niger. The project will give priority to strengthening the consideration of CCA in the water sector, by improving the coordination in data collection and knowledge management at the national and local level and strengthening the institutional capacities in understanding the dynamics of climate change in the water sector for improved planning and budgeting. Field tested interventions will support this process and the project will introduce adaptive water options such as hybrid solutions for households' water provision, small farm's irrigation systems or multifunctional infrastructures at sensitive ponds and *koris* to protect equipment and farmland from erosion and floods. The project will result in an improved resilience of the targeted communities against the adverse effects of climate change. The project is also expected to have indirect positive impacts on non-targeted communities by spreading adaptation methods throughout the country. At the national level, policy makers' capacities will be strengthened to incorporate climate risks into planning. This project will be a major contribution to the Niger NAP, in particular in the sector of water resources. The project will work in synergy with the GCF NAP project "Advancing medium and long-term adaptation planning and budgeting in Niger" to support Niger's NAP process.

20. The strategy is consistent with the United Nations Development Assistance Framework (UNDAF) Country Programme Outcome 2: "By 2018, supported national, regional and local institutions benefit from disaster risk management, prevention, environmental management, and food security"[28]. It will enable achievement of Output 2.2: "National, regional, and local institutions have increased capacities to be more resilient to climate change and to manage food insecurity crisis and other natural disasters"[29].

21. In addition, the project is aligned with the steps taken by the GoN since the 1990s to deal with the consequences of climate change on its development. In 1996 a large, strong, and sustained institutional framework was set up with the creation of the National Council for Environment and Sustainable Development (CNEDD). Niger also ratified the United Nations Framework Convention on Climate Change (UNFCCC) in 1995. The country has since developed a range of strategic documents such as the National Environmental Plan for a Sustainable Development (PNEDD), the National Strategy and Action plan for Climate Change and Variabilities (SNPA/CVC) or the National Strategy and Action Plan for the Management of the Global Environment (SNPA/ANCR). By complying with its commitments to the UNFCCC, via the National Communications – the last one being the Third National Communication (TNC) published in 2016 –, the Intended Nationally Determined Contribution (INDC)[30] to the 21st Conference of the Parties (COP-21) and the NAPA[31], the GoN is aware of the need to integrate climate change in its policies and programmes. The Government therefore already took into account climate change adaptation (CCA) in a number of areas, including in the water sector.

22. With regards to adaptation priorities, the country also started its National Adaptation Plan (NAP) process in 2014 [32], with the assistance of the National Adaptation Plan Global Support Programme (NAP-GSP)[33] from the United Nations Development Programme (UNDP) and UN Environment. In 2016, a mission was conducted to identify priority interventions to advance the NAP process, including consultations with the Green Climate Fund (GCF) National Designated Authority, i.e. the SE/CNEDD. As a consequence, a GCF project was approved in 2018 for the period 2018-2021 with a budget of US$2,997,282 on "advancing

[28] https://www.uncclearn.org/sites/default/files/niger_undaf.pdf
[29] *Idem*
[30] http://www4.unfccc.int/Submissions/INDC/Published%20Documents/Niger/1/Niger-INDC-versionfinale%20.pdf
[31] https://unfccc.int/resource/docs/napa/ner01e.pdf
[32] http://www.adaptation-undp.org/projects/niger-nap-process
[33] http://www.adaptation-undp.org/projects/supporting-ldcs-advance-national-adaptation-plans

medium and long-term adaptation planning and budgeting in Niger"[34] to serve as co-financing for this project. Its main goals are to compile a NAP and to facilitate its implementation, before putting in place mechanisms to ensure appropriate reporting and monitoring.[35]The long-term goals informing Niger´s adaptation efforts are outlined in the country´s Nationally Determined Contribution (NDC), submitted in 2016. The NAP process timeline is presented below.

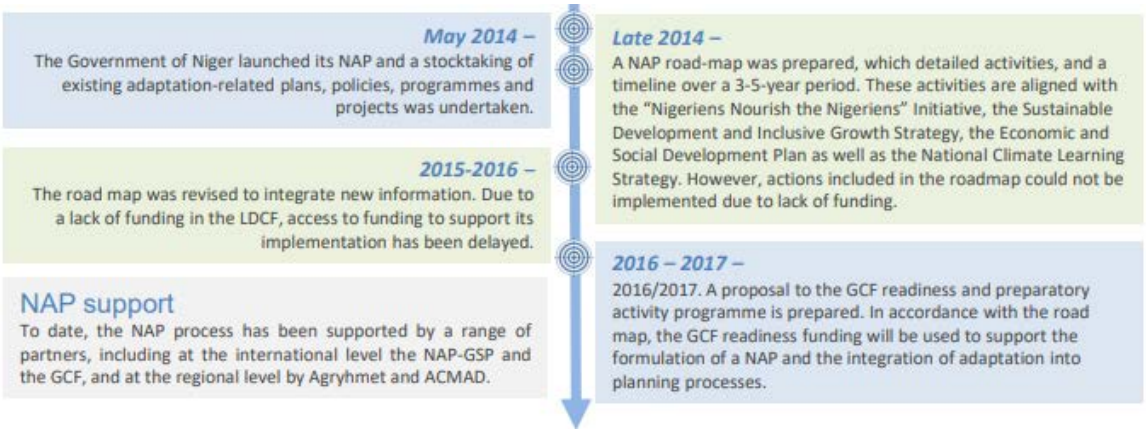


Figure 5: NAP Process timeline[36]

23. The NAP builds on the 2006 NAPA[37], which defined four priorities related to water resources: Restoring basins for crop irrigation, Diversifying and Intensifying crop irrigation, Water control (surface and ground waters), Watershed protection and rehabilitation of dump-off ponds.

III.1 National benefits

24. The project builds on a relevant national framework of CCA-related policies, defined and implemented through budget allocations. This facilitates the mainstreaming of adaptation at all levels of the country:

- The project will advance the NAP process in the water sector, through the establishment of sectoral institutional mechanism steering the process and liaising with the national level (Output 1.1.), the development of climate-related skills among key staff in national institutions and decision-makers (Output 1.2.), the generation of climate evidence-based to inform adaptation planning in this sector (Output 1.3.), and the development of indicators and markers to facilitate CCA mainstreaming into planning and budgeting.
- The project will complete the NAPA adaptation measures, as well as match orientation of the PRS and SDR priorities.
- National capacities for coordination and climate mainstreaming in planning and budgeting processes, will be improved through capacity building of key personnel from all relevant institutions on climate change, and budget tagging and tracking tools for climate finance. These concerted efforts by the SE/CNEDD, the National Commission for Water and Sanitation (CNEA), and the Ministries

[34] http://adaptation-undp.org/projects/NAP-Niger-GCF

[35] Ibid.

[36] http://globalsupportprogramme.org/sites/default/files/resources/niger_nap_country_briefing_final_for_print_021117.pdf

[37] https://unfccc.int/resource/docs/napa/ner01e.pdf

of Planning and Finance will contribute to the implementation of progressive procedures and tools that can facilitate CCA integration into budget processes.

- By designing, demonstrating, and disseminating integrated water management techniques aligned with adaptation priorities, the project support the implementation of the PANGIRE , and contributes to strengthen the adaptive capacity of population in line with sectoral objectives.
- The project "Scaling up Community Based Adaptation (CBA)[38] in Niger is an appropriate entry point for integrating climate change into local development plans. Project experiences will help to apply the methodology in revising local drinking water and sanitation plans. In addition, the implementation of NAPA priority intervention in Niger has played a key role in raising awareness of climate change and in enhancing resilience through income generating activities and more resilient agricultural techniques in particular. The project will therefore build on these experiences to sustain their impacts in the long-term and scale-up opportunities in the NAP process.
- The GCF NAP project, will advance medium and long-term adaptation planning and budgeting in Niger. This project will be implemented in close cooperation with the GCF-financed NAP initiative, to avoid duplications and achieve the highest possible impacts for climate change adaptation planning at the national level.

25. The proposed project will specifically focus on CCA and the water sector. The valorization of water resources offers a specific opportunity to ensure the provision of CCA services at the national level. The sector is recognized and promoted as a key pillar in the overall economic development of the country. Because of the close tie with the GCF- NAP project, the proposed LDCF project will pave the way for the sectoral NAP on water resources management. In addition, by implementing CCA interventions, the proposed project will support the GoN in reaching its development targets and the SDGs.

III.2 Local benefits

26. In the same way that the national government will benefit from significant capacity building, both departmental and municipal authorities will be strengthened in their capacity to incorporate climate risks and opportunities in their planning and budgeting work related to water resources management. As for the local population, the benefits would be plural:

27. **Water for agriculture**: At the local level, the second component will introduce hybrid solutions that offer practical opportunities to facilitate smallholders' access to alternative sources of irrigation for their high-value vegetable crops through small-scale irrigation schemes. These improved methods will enable the development of a higher quantity but also a better quality in vegetable and crop production. Moreover, irrigation ponds (manual or gravity irrigation) will secure the development of livestock, including dairy production. In addition, access to water will reinforce the resilience of nomad and sedentary livestock by improving the herd's health, and hence decreasing the vulnerability of breeders.

28. **Drinking water**: Rural communities will benefit from a better drinking water access. This will improve health and sanitation conditions. Indirectly, with a larger production of vegetables, meat, and milk, the nutritional situation of the population is also expected to improve. When rural communities find a way to build and operate their own water supply systems, they inevitably build multipurpose systems, which combine household drinking water supplies with a variety of productive uses of water. Multi-purpose village water supply systems follow the pattern of diverse productive uses of water already integrated by rural communities into the systems they build for themselves. In addition, the implementation of productivity optimization methods and access to markets adapted to the village context will follow the integration of hybrid systems.

[38] Project document, UNDP-GEF PIMS 4790

29. **Social benefits**: The proposed project will impact the social sector as well. In order to ensure the continued existence of the irrigation infrastructures (manual or gravity irrigation), communities must manage it. In order to organize this maintenance, a participatory approach by all the villagers is anticipated, mostly from the youth and women who are generally the most excluded from these maintenance tasks. The idea is to select several young villagers on a voluntary basis to ensure the maintenance of the irrigation ponds. They will be trained to learn relevant skills. Thus, irrigation ponds will produce social benefits in terms of integration and participation of excluded populations (youth and women) in the daily decision-making of the targeted communities, and will generate a positive impact on the rate of employment. As a result, the maintenance of irrigation ponds will further develop the associative life of communities but also political and civil life by implementing an administration board to manage the new infrastructures.

30. In line with the PANGIRE, the proposed project will increase water supply for the seven most vulnerable communities, targeting the villages which have a safe water access ratio that goes below 25%. The beneficiary villages were targeted following this threshold, and by taking into account additional safety and security criteria. They will be reexamined during the project starting phase to ensure the most vulnerable villages are targeted.

IV. RESULTS AND PARTNERSHIPS

IV.1 Expected Results

31. The objective of the project is to "strengthen national and local institutions and communities' capacities in adaptation planning and budgeting, while using opportunities of water market to advance local adaptation and resilience in Niger". This will be done through improved management of water resources, and by mainstreaming water-related climate risks considerations into national and local planning processes. In the long run, targeted local communities in Niger will be more resilient to climate change.

32. To achieve this objective, the project will build on past and previous projects and programmes and will establishes strong synergies with ongoing adaptation related initiatives (see section IV.3 for more details), in particular the GCF NAP project.

33. As part of the NAP process, and in addition to ongoing interventions, the project will specifically contribute to CCA planning and budgeting in the water sector, the introduction of climate resilient water resources management techniques and measures, and knowledge management. Interventions are structured around 3 complementary and mutually reinforced components:

34. The first component will improve CCA planning by promoting climate change resilient water resources knowledge, management and planning at national and local levels. The second component will use a water sector wide approach to access to adaptation finance at the local level. It will enhance the access to climate resilient water systems in the targeted areas. The third component will foster evidence-based policy decisions.

IV.2 Components, outcomes, outputs and activities

35. The LDCF-funded project builds on relevant national development policy frameworks, the adaptation related initiatives including the GCF NAP support project, and results from a large consultative process, which identified the most urgent and incremental needs of the national and local stakeholders, including the most vulnerable communities in the targeted areas. During the project formulation, local populations were consulted at municipal, village and community levels about the specific vulnerabilities to address, and relevant response mesures, in line with the project outcomes. These field visits allowed the ranking of adaptation needs and priorities, and the identification of proposed activities as well as their costing[39]. Through this large consultative process involving key national and local stakeholders including projects and programmes, the water sector has been identified as the priority sector, based on current coverage by ongoing NAP initiatives such as the GCF NAP Support project, and the GEF-funded project "Integrating Climate Resilience into Agricultural and Pastoral production for food security in vulnerable rural areas through the farmers field school approach", and based also on the potential role of the project to contributing to the NAP process.Consequently, the proposed project is centering its efforts on the water sector management. The outcomes of the project are presented below:

Component 1: Improving the planning of adaptation in the water sector

Outcome 1: Integrate climate change adaptation in relevant water-related budgeting and planning frameworks at national and local levels

Co-financing amount for Component 1: US$ 2.667,282
LDCF project grant requested for Component 1: US$ 1,370,900

[39] *Ibidem.*

Without LDCF intervention (baseline situation)

36. The country has been developing and adopting several development plans and strategies in various sectors to integrate climate change[40].

37. The 2017-2021 PDES[41] is the unified development framework of the country. The PDES is organized around five major areas that are cultural renaissance, social development and demographic transition, accelerating economic growth, improving governance, peace and security, and sustainable environmental management. Its Priority Action Plan includes a budget line for the promotion of CCA and CCM measures. The PDES dedicates an entire program to improve development management. With regards to budget programming, the PDES is implemented through the Multiannual Budget and Economic Programming Document (DPBEP) and the Multiannual Expenditure Programming Documents (DPPD) of sectoral ministries covering a period of three years. They are updated through the annual macroeconomic and budgetary framework exercises, The PDES orientations reflect the various initiatives taken by the GoN to advance the adaptation agenda.

38. The water sector is key to the development of Niger, as stated in 2017 in the PANGIRE approved on May 9th, 2017[42], which reiterates the importance for the water resources sector to adapt to climate change. It complements the 2010 Water Code[43], the 2005 National Strategy for the Development of Irrigation and Water Harvesting (SNDI/CER), the 2015 Strategy for Small Irrigation[44], or the National Drinking Water Supply and Sanitation Program (PNAEPA). The country also benefits from the support of the UNDP Water Governance Facility @SIWI to provide the Ministry of Water and Sanitation (MH/A) with human, financial and organizational support, following the GEF funded project "Implementing NAPA priority interventions to build resilience and adaptation sectors of the agriculture sector to climate change in Niger"[45,46]. By controlling water distribution, preventing droughts and setting up a resilient agricultural sector better prepared for climatic disruptions and providing sufficient food (vegetable crops, but also meat and milk by improving conditions of livestock farmers and their herds) and drinking water for local populations, Niger will benefit from improved economic productivity.

39. The decentralization process of the PANGIRE and its operationalization at the communal level are based on the development of Local Water and Sanitation Plans (PLEA), and the creation of consultation and management bodies: The Water Management Local Committees (CLE).

40. The implementation and monitoring of environmental policies, including climate change policies, are coordinated by the National Council for Environment and Sustainable Development (CNEDD), created in 1996 and placed under the Office of the Prime Minister. It is supported by an Executive (SE/CNEDD) for the day-to-day management. The CNEDD is responsible for coordinating the NAP process. In the water sector, the CNEA is the technical advisory body of the government in the definition, implementation, and monitoring of sectoral policies.

41. The project of community action for climate resilience (PAC/RC), financed by the World Bank from 2012 to 2019, also supported the integration of climate change considerations into planning through the implementation of its first component "integration of climate resilience into development strategies at the national and local level".

42. In addition, the project will directly build on the results of the GCF NAP project, which is planning a range of actions to address the main barriers that hinder CCA mainstreaming into planning in Niger: limited institutional, functional and technical capacity; constrained financial, human and material resources; limited synergies and coordination among climate adaptation initiatives; weak monitoring and evaluation

[40] Bachir Altiné, M. (2017), Rapport thématique sur les ressources en eau pour la formulation du projet de "Planification et financement de l'adaptation aux changements climatiques au Niger"
[41] http://www.ne.undp.org/content/dam/niger/docs/UNDP-NE-PDES%202017-2021.pdf
[42] http://www.hydraulique.gouv.ne/
[43] DBD-Ordonnance n° 2010-09 du 1er avril 2010, portant Code de l'eau au Niger - J.O.Sp n°9 du 29 avril 2010, page 112
[44] http://www.reca-niger.org/IMG/pdf/SPIN_FINALE_Niger.pdf
[45] http://watergovernance.org/programmes/goal-wash/niger/
[46] https://www.thegef.org/project/implementing-napa-priority-interventions-build-resilience-and-adaptive-capacity-agriculture

mechanisms; and insufficient data availability, reliability and management. It covers 5 sectors to be identified during the inception phase, and, based on discussions for possible synergies with the LDCF project, will exclude the water sector. Through its ground-setting activities to the NAP process and the strengthening of sectors key to the adaptation of the water sector, this GCF project will therefore provide the basis for an improved understanding of climate change in Niger and planning for adaptation. The project will contribute with grant co-financing of US$ 2,667,282 during the remaining period of the project.

43. However, the institutional analysis undertaken during the PPG[47], shows that the current institutional framework in Niger is not entirely operational, presents several weaknesses (particularly in terms of human resources), lacks coordination, and is unprepared with regards to the mainstreaming of climate change adaptation and mitigation. Despite efforts made thus far by the GoN, the inclusion of climate change into development plans, budgeting, and programs for the water sector at the national and local level remains nascent. In addition, there is a lack of coordination of activities to adequately promote integrated water resources management, in particular for agriculture and rural activities, and to take into consideration adaptation into sectoral budgeting framework.

With LDCF intervention (with adaptation benefits)

44. The intervention will address the main challenges to integrating CCA into water planning and budgeting at national and local levels (taking gender into consideration), as identified in the May 2014 NAP Stocktaking Report and under the framework of the 2012 LEG Technical Guidelines on NAP. Under Component 1, Niger will use LDCF resources to develop effective multi-stakeholder processes to advance NAP in the water sector. It will support the alignment of the NAP with the national priorities and strategic frameworks of the water sector, in alignment with the activities conducted under the GCF NAP project.

45. Following the establishment of the appropriate linkages between the national coordination mechanism and the sectoral mechanism, the project will support the production of information needed to facilitate CCA mainstreaming into the water institutional framework. The most appropriate adaptation options in the water sector will be identified, based on the climate risk and vulnerability assessment and the appraisal of their costs and benefits. It is expected that capacity building activities will enable interactions and synergies among actors, address gaps, and advance the NAP process in the water sector, in synergy with the GCF-financed project.

46. Finally, communication and capitalization of lessons will be supported to maximize the efficiency and the impact of the project. The main implementing agencies will be supported in compiling lessons learnt so as to disseminate and perpetuate the good practices.

47. Component 1 will give women access to trainings and workshops on resilient water resources management practices and benefits. This will reduce the existing gender gap on technologies access and agricultural productivity, through improved access to water for crops, and result in women empowerment and a lightened workload.

Output 1.1: An operational coordination and consultation mechanism is established to ensure ownership by all actors of the process of mainstreaming CC in the water sector

48. An operational coordination and consultation team will be created under the direction of the MH/A to jointly identify and prioritize adaptation needs in the water sector and coordinate the monitoring of water management activities. The team will also coordinate the implementation of the communication and raising awareness program on Integrated Water Resources Management (IWRM) (output 1.2), climate change risks for water resources (output 2.1) and the online community platform (output 3.3). This operational team

[47] Danguioua, A. (2017) Rapport thématique sur les politiques publiques pour la formulation du projet de “Planification de l’adaptation aux changements climatiques au Niger”

will work in close collaboration with the NAP coordination mechanism led by the CNEDD and established under the GCF NAP support project, as well as with the CNEA.

49. The team will update the NAP sectoral road map, including sequencing of various stages and draft a monitoring and evaluation plan for the process. This sectoral road map is drawn from the overall NAP roadmap adopted at the national level under the GCF support project.

50. An updated gap and need analysis will also be conducted in order to identify constraints and required measures to create an enabling environment for integrated water resources management in a context of climate change and variability. The analysis will identify: a) the strengths and weaknesses in the capabilities, data, information and resources needed to contribute effectively to the water management process, and b) potential barriers to the planning, design and implementation of IWRM practices.

51. This output will also build on the priorities and recommendations elaborated from the national database set up under output 3.2. Urgent needs and targeted groups will be refined and made more precise in order to respond to the needs of the water sector in terms of CCA. Eventually, the workshops at national and local levels and the compilation of the revised sectoral and subnational priorities, will conduct to the elaboration of the draft of the water sector NAP. The draft will define the NAP framework and strategy for the water sector, which will complement the already existing NAP process implemented through the GCF-financed project.

Activity 1.1.1. Set up and run an operational coordination team for the water sector that will steer the revision of the institutional framework and pave the way for the sectoral NAP.

Activity 1.1.2. Draft a roadmap to advance the NAP process in the water sector.

Activity 1.1.3. Conduct an analysis of the gap and need for the creation of an institutional enabling environment for adaptation through IWRM.

Activity 1.1.4. Conduct multi-stakeholder consultation workshops at national and local levels to identify and appraise on-going water-related climate change adaptation options.

Output 1.2: National, subnational and local stakeholders understand CCA practices related to sustainable water resources management

52. Several partnerships will be created with national institutions (including the Ministry of Water and Sanitation) and regional organizations (Niger Basin Authority (NBA)) that have mandates relating to the water sector and water resource management. Partnerships will be further extended to the GCF-financed NAP project and the Climate Information and Pro-spective Development Project (PDIPC) initiative for a joint design and implementation of training packages. In particular, the PDIPC will improve the quality of climate information and products and improve climate modeling, prediction, and information dissemination, to make it easily understandable for key farmers and pastoralists. These trainings will support the integration of CCA in planning tools, cost-benefit analysis for the water sector, innovative and climate-smart techniques for IWRM, flood modeling, and costing and integrating CCA budgets into national and subnational budgets. Three training modules will be prepared for ministries' staff on (i) the current climate variability and future climate projections, and the trends in terms of pressures on the water resources; (ii) the water market, with the current and future water use correlated with socio-economic developments; and (iii) guidance on the climate-smart use of water resources.

53. These series of training sessions will be organized under the partnerships established with both projects (DPIPC and NAP GCF) with national institutions (Ministry of Water and Sanitation, DGRE, ENAM, University of Niamey, Geography Department, EMIG, etc.) and regional organizations (NBA, AGRHYMET, CILSS, ACMAD). About 250 experts, national, subnational and local decision-makers will be trained as a result of this output.

54. These partnerships with national and regional institutions will also support public awareness and outreach programmes and facilitate the communication, education and public access to information on climate change adaptation. Campaigns of information and sensitization about CCA and water resources management will be launched. These campaigns will focus on groups at risk in the water sector and estimate their needs. The consultation will target vulnerable groups such as women, children, the elderly, pastoralists, farmers, etc. It will also raise awareness on best practices. This will take the form of one-month information campaigns via the radio, information gathering in villages, the dissemination of leaflets, etc.

55. Strong coordination will be established with the outcome 3, in particular, the lessons learned collected, analysed and managed will provide critical resources to support national, subnational and local stakeholders to have an adequate understanding of CCA practices related to sustainable water resources management.

Activity 1.2.1. Forge partnerships with national institutions (ie. National Commission for Water and Sanitation) and regional organizations (NBA) that have mandates relating to the water sector and water resource management.

Activity 1.2.2. Prepare training modules for ministries' staff and train key stakeholders.

Activity 1.2.3. Develop public awareness and outreach programmes to facilitate the communication, education and public access to information on climate change adaptation in the water sector.

Output 1.3: Data collection/production, information and communication mechanisms, are in place for the water-sector NAP

56. Under Output 1.3, decision-makers will be sensitized on efficient CCA practices in the water sector and on the benefits of data exchange. As such, permanent institutional links and data exchange protocols are necessary to allow participants to be more efficient and ensure the alignment and compatibility of various databases and monitoring systems.

57. These links and protocols will be ensured through the harmonization and standardization of indicators, data processing, modeling, projections, vulnerability assessments, GIS related to CCA practices in the water sector. This harmonization and standardization process will be conducted in close consultations with the NAP-GCF project, to ensure a strong alignment across the different sectors. A review of the legal, institutional and regulatory frameworks will also be conducted to identify the gaps and inconsistencies in directing adaptation investment in the water sector. This review will support the achievement of the output 1.4 by providing guidance on the needs for increased integration of CCA into these existing frameworks This output will also support the assessment of climate vulnerability for targeted communes on the basis of current climate variability and future climate projections, current and future land and water resource use and socio-economic development.

58. Then, information and communication mechanisms for CCA practices will be shared via workshops to enhance public access to knowledge on existing adaptive mechanisms and success stories in preventing climate-related hazards in the water sector.

59. They will also inform the climate information and knowledge management strategy expected to be formulated under the GCF NAP support project. This strategy will serve to strengthen the information collection, production and dissemination mechanisms for iterative updating of climate-relevant knowledge. Data will be organized to facilitate communication on CCA practices between all the key stakeholders as well as the population, and to draw lessons from CCA activities and implement and replicate good CCA practices. This will lead to a systematic integration of these good practices into the national policies and strategic frameworks in the water sector under Output 1.1 as well as allow adequate cooperation and complementarity with the NAP process. This output will also encourage dialogues through the annual publication of reports and the establishment of fora for dialogue between communities and the MH/A, to broaden perspectives and visions and to promote the resolution of possible water conflicts.

Activity 1.3.1. Establish permanent institutional links and data exchange protocols between key stakeholders.

Activity 1.3.2. Harmonize/standardize indicators, data processing, modeling, projections, vulnerability assessments, GIS for CCA practices in the water sector, in line with the GCF NAP.

Activity 1.3.3. Review the legal, institutional and regulatory frameworks.

Activity 1.3.4. Assess climate vulnerability and identify coping measures for targeted communes

Activity 1.3.5. Organize workshops to enhance public access to knowledge on existing adaptive mechanisms and success stories in preventing climate-related hazards related to water sector.

Activity 1.3.5. Publish annual reports and establish fora for dialogue between communities and the MH/A.

Output 1.4: CCA is integrated in relevant planning and budgeting frameworks in the water sector

60. Under Output 1.4, CCA will be integrated in relevant planning and budgeting frameworks in order to improve water resources management in the context of climate change. A complementary support is provided by the GCF NAP project for additional sectors, through (i) the review and revision of existing integration guidelines for the local development plans (PDC), and sectoral policies and strategies, and (ii) the adoption of budget tagging and tracking tools for climate finance and assisting sector budget and planning departments to apply tagging tools.

61. This output will support the identification of climate adaptation options for the water sector through the conduct of cost-benefit analysis, building on coping measures identified in activity 1.3.4. This will guide the decision-making process for the NAP elaboration and create a momentum between all stakeholders by exchanging experience and information.

62. The output will also support the development of pluri-annual programmatic and budgeting climate sensitive approaches for the water sector, and the set up of climate budget code for climate budget tagging in order to track climate expenditures and climate budgeting. These budget codes will be harmonized with the different climate indicators and financial climate markers across key sectors developed under the GCF NAP in order to enable the setting up of a national climate budget and future investment lines at the national level. These approaches will be developed through the compilation of priorities in the water sector, the organization of stakeholders' consultations, the integration of comments and the validation and dissemination of a NAP for the water sector. In addition, to enable climate budgeting global comparison, this output will build on the practices applied for existing Climate Public Expenditures and Institutional Review (CPEIRs).[48] This will support the development of a coherent vision for external and national climate investments to put together a water regulatory framework to better integrate CCA in IWRM.

Activity 1.4.1. Conduct studies to assess the costs and benefits of innovative and/or adaptive measures and techniques in the water sector.

Activity 1.4.2. Develop pluri-annual programmatic and budgeting climate sensitive approaches and set up climate budget codes.

Activity 1.4.3 Put together a detailed and coherent water legal, institutional and regulatory framework to better integrate CCA in water resources management.

Component 2: Developping field-tested knowledge for IWRM

Outcome 2: Disseminate economically sustainable hybrid village water systems and multipurpose infrastructures

[48] https://www.climatefinance-developmenteffectiveness.org/about/what-cpeir

Co-financing amount for Outcome 2: US$ 25,400,000

LDCF project grant requested for Outcome 2: US$ 6,052,053

Without LDCF intervention (baseline situation)

63. Due to the lack of facilities, resources, and capacities, farmers and breeders continue to rely on non-resilient and poor water infrastructures and techniques. Under the baseline scenario, rural communities endure important yield losses due to severe climate events such as floods, droughts, and erratic rainfall patterns that are becoming increasingly frequent.

64. However, four on-going projects are supporting communities in improving their access to water and provide decision-makers with field-tested opportunities for investment in water infrastructures.

65. The project for the implementation of the PANGIRE, under its outcome 2 “mobilize and enhance natural water resources and develop socioeconomic activities”, will install hydraulic infrastructures for drinking water access, sanitation, agriculture or livestock.

66. The second phase of the Integrated Programme for De-velopment and Adaptation to Climate Change (PIDACC) will promote the sustainable use of natural resources in the Niger Basin to ensure the protection of existing water resources and their ecosystems, supporting an ecosystem-based adaptation. Through the provision of important lessons learned, it is expected that the project will provide US$24,300,000 in in-kind co-financing.

67. In addition, the second phase of the support programme for the water and sanitation sector (PHRASEHA II), financed by the Swiss Cooperation and implemented by the MHA, will also support the project by providing lessons learned in the implementation of its project interventions under its second component which aims at giving access to equitable and affordable access to water resources for drinking and sanitation and hygiene for rural populations.

68. Finally, the second phase of the project “water for growth and poverty reduction in the Mekrou sub-basin in Niger” will also provide lessons learned and additional infrastructures that will support the outcome 2 of the LDCF project. This project is implemented by the Ministry of Hydraulics and Sanitation and the permanent secretariat of the PANGIRE (SP/PANGIRE), through the Global Water Partnership for West Africa (GWP-AO). This project will provide US$ 1,100,000 of in-kind co-financing.

69. Even though these projects are supporting an improved access to water for rural populations, they fail to introduce climate change adaptation concerns, and may have a limited impact in the long term.

70. A detailed and participatory analysis of climate risks and hazards has been undertaken at the village level in seven municipalities during the PPG phase (see table 1). The study shows that all seven municipalities suffer heavily from climate change induced by the alteration in rainfall patterns. Without the GEF intervention, this situation will persist, with no additional support to mitigate the climate-related impacts on their living conditions.

With LDCF intervention

71. Under the alternative scenario, communities will become more resilient to erratic rainfall patterns. Land erosion and flood management planning as well as more efficient water supply and irrigation technologies will help sustain water and food supplies. This outcome will offer a specific opportunity to ensure the provision of CCA water services at the local level. The resources provided by the LDCF will help promote the widespread diffusion of economically viable hybrid water supply systems and multipurpose infrastructures that, in addition to providing health benefits to beneficiary households, will make access to water an opportunity for income generation. The preparedness of the vulnerable communities to climate related extreme events will be strengthened and municipalities will implement flooding risk prevention plans drafted under the Component 1. Most vulnerable communities, as identified in the NAPA, are targeted, namely Tenhiya in the department of Zinder, Kaou, Takanamat, Tchintabaraden and Tabalak in the department of Tahoua, and Ouallam and Tondikiwindi, in the department of Tillabery.

72. The Component 2 will also give women access to a dedicated training to ensure the maintenance of the hybrid and irrigation systems. This will reduce the existing gender gap in accessing technology and agricultural productivity and result in women empowerment and a lightened workload. Moreover, by supporting the development of climate-resilient water systems, the impacts of droughts on agricultural yields and water scarcity will significantly be reduced. This will therefore reduce the travel distance of women's often dangerous daily journeys, to fetch water and the threats of food insecurity caused by crop losses. As a result, women will have more time available for other activities, whether it is income-generating activities or participation in the citizen life of their village and education.

73. The beneficiary communes for each infrastructure were selected following a SWOT analysis, informed by the information collected during the PPG. This identified the context for each commune and which infrastructure would yield the highest impact. A detailed table summarizing the infrastructures and the results of the SWOT analysis is available in Annex K. The villages will be selected during the implementation of the project, in consultation with the local councils for each commune, based on the vulnerability and relevance of the intervention.

74. Following the sensitization activities in the Component 1, the field testing of economically sustainable hybrid village water system and multipurpose infrastructure for efficient water management systems will be conducted. It will enable the creation of an economy around water resources in remote villages and provide useful lessons for upscaling successful practices.

Output 2.1: Hybrid household water supply solutions and smallholder irrigation systems are promoted and adopted in vulnerable communities

75. Under the Output 2.1, 5 villages in the communes of Tenhiya (2), Tchintabaraden (1) and Kao (2) will be provided with one gravity tank of 15,000 liters, equipped with two distinct pipes for distribution of drinking water and for irrigated agriculture. The gravity tanks will be fed through the drilling of a borehole and the installation of a solar water pump, complemented by a generator to provide energy when needed (at night or if the weather conditions are not sufficient for solar energy generation).

76. More specifically, the first pipe will provide twelve standpipes serving 10 families each, with drinking water. The benefiting households will also be provided with water storage and treatment systems. The second pipe will distribute water to 80 small farming perimeters of 500m² for micro irrigation for agriculture. In total it is expected that, across the 5 villages, 5,600 people will benefit from these infrastructures. A detailed feasibility study for the design and procurement of the hybrid systems and irrigation systems will be conducted, taking into account the sustainability of these systems, including after the end of the project. To avoid vandalism around the groundwater supply systems, electrified fences will be installed.

77. A detailed feasibility study will carefully assess the sustainability of these drillings to avoid over exploitation of water table resources in the seven villages for both outputs 2.1 and 2.2. Long-term sustainability of the exploitation will be critical for the success of the project, and will depend on factors such as density of wells, depth and transmissivity of the producing horizon(s), vulnerability to contamination from human activities (pesticides, fertilizers, waste disposal etc.), abstraction rates etc. This feasibility study will include (i) a preliminary assessment collating from existing hydrogeological national and other international database of published maps, to identify high suitable/potential areas (make technical and socio-economic base case), (ii) a socio-economic analysis to further measure the viability of implementation (total cost), indirect benefits (ecosystem), indirect costs (opportunity cost of water) and other macro-scale aspects (local heterogeneity, synergies/trade-offs), (iii) a land-use/land cover map, land transitions (iv) the identification of the type of aquifer, hydraulic connections, aquifer productivity and the adequacy of water supply, (v) an assessment on the impact on other water uses and nearby groundwater users, and if relevant (vi) hydro geochemical analysis, irrigation water quality parameter (ie. SAR) to measure the suitability of water for irrigation and understand the mechanisms that may affect groundwater for irrigation.

78. The International Hydrological Programme (IHP) of UNESCO has extensively worked on assessing water resources in the region of the Iullemeden Aquifer, where the project will be implemented, and it was instrumental in the preparation and execution in cooperation with the OSS of the GEF medium-size project "Managing Hydrogeological Risk in the Iullemeden Aquifer System" (2004-2007). A significant amount of data and experience is available within UNESCO, calling for the establishment of a partnership for supporting the feasibility study process. UNESCO/IHP supports member states in developing institutional and human capacities for water resources management and governance at local, national and regional levels. The IHP can contribute to the achievement of the outcomes of the project in particular strengthening the capacity of national institutions and communities through trainings on the management of groundwater resources for climate change adaptation measures and to inform adaptation policies.

79. Similarly, the UN-International Groundwater Resources Assessment Centre (IGRAC), working under the auspices of UNESCO and WMO, has extensive experience in studying groundwater and, as a close partner to UNESCO/IHP, could also support the feasibility studies for the drillings under outcome 2 (both output 2.1 and 2.2).

80. Both agencies would work with national partners to use the knowledge available at the local level and build the capacities for in-depth groundwater assessment of these stakeholders. During the project implementation, the project team will explore possibilities to involve these agencies to ensure resources can be used efficiently, and the knowledge within these agencies can be built upon.

81. Groundwater resources can be vulnerable to climate change because of 1) inadequate legislation, regulations, and national water policies that provide no clear priorities or directions to responsible government agencies, and 2) limited financial means and personnel to sustainably manage groundwater resources and water supply systems. In this context, improved national and local capacity on groundwater resources governance (including but not limited to the use and prioritization of IWRM and conjunctive management) can contribute to setting up adequate adaptation policies.

82. In addition, water user committee will be established in each community to ensure the maintenance of the gravity tanks and will be ultimately responsible for the operation and the regular collection of royalties from users of drinking water and water for irrigation. Before and during the construction of the water infrastructures (both for output 2.1 and 2.2), the committee will discuss the need to finance a guard for the infrastructures to prevent vandalism if the fences are not considered sufficient. At least 50% of the committee members will be women. These water user committees will receive technical support and will be trained to develop sustainable plans for maintaining hybrid systems during and beyond the project lifetime. The members of the committees will also benefit from trainings in maintenance, management, irrigation and agronomy, including for the activities conducted under output 2.2. Better water access will generate a new economic dynamic in the communes as the use of sustainable methods will increase agricultural productivity and give jobs to young people and women. It will also reduce the pressure on water resources between agriculture and livestock.

83. Considering the high risks associated with these infrastructures, the Social and Environmental Planning Procedure (SESP) conducted during the project formulation, identified the need for the conduct of an Environmental and Social Impact Assessment (ESIA) and an Environmental and Social Management Plan (ESMP). The ESIA and ESMP will provide assurance that the project activities do not have a negative impact, and will issue requirements to mitigate identified risks. These will cover the entire project, but given the higher risks involved with the implementation of Outcome 2, the ESMP is likely to have a stronger focus on this outcome. The ESIA and ESMP will be conducted in parrallel with the feasibility study conducted under the activity 2.1.1. and will be complementary.

Activity 2.1.1. Conduct a feasibility study for the installation of sustainable hybrid systems and irrigation systems.

Activity 2.1.2. Install hybrid systems in 5 villages, including irrigation systems.

Activity 2.1.3. Establish an effective water users' committee in each village.

Activity 2.1.4. Train instructors of the associations' village councils to form young people and women to maintain the hybrid water systems.

Activity 2.1.5. Conduct an ESMP and ESIA

Output 2.2: Multi-purpose infrastructures in sensitive ponds and koris to protect equipment and agricultural land from erosion and flooding are installed

84. In areas subject to water-related challenges, the project will install water supply, irrigation and flood protection infrastructures and systems around sensitive ponds, koris and shallow waters, and restore surrounding degraded areas to enhance their protective and productive functions. A cost benefit analysis will evaluate the different options for the development of multi-purpose infrastructures and their environmental and social impacts. For water supply, irrigation and flood and erosion protection, the following interventions will be conducted:

- The drilling of 50 boreholes for small garden perimeters, around ponds, with easily accessible groundwater resources, equipped with solar pumps and a linear pipeline distribution system, including californian irrigation systems[49], drainage systems and drip irrigation systems. This will cover 12,5 hectares.
- In areas vulnerable to floods and erosion,
    - 10 kilometers of eroded riverbanks will be restored and protected through reforestation,
    - 1,000 hectares of glacis[50] will be restored and protected through reforestation,
    - 300 hectares of wooded areas will be regenerated/afforested and 380 hectares of grazing areas will be protected through half-moon formation, bank formation and planting of seedling.
    - 2 spreading thresholds will be installed

85. The analysis will also identify opportunities for micro, small and medium-size enterprises (MSMEs), but also public-private partnership opportunities and financing strategies. The best environmental options will be analyzed in order to identify, design and\ build infrastructures that combine the restoration of ecosystem functions with the provision of sustainable services (especially for CCA and climate-related disasters prevention).

86. With these installations, trainings will be set up to guarantee the success of the activities and enable operation and maintenance of the facilities by the population. The trainings will cover, among other things, watercourse protection techniques, infrastructure maintenance, and socio-environmental monitoring. Additional productivity gains are expected through these land-use measures providing higher revenues, some of which will be set aside for the operation and maintenance led by the committees. The principle of mobilizing funds to ensure the functioning of the water user committees will be integrated into the protocols established with these structures. With these activities, water access will be easier for the agriculture as it will prevent from the silting of ponds, koris claw, erosion and floods which are threatening the productivity. The water user's groups established and trained under output 2.1 will also be responsible for the maintenance and the management of the infrastructures to ensure their sustainability.

Activity 2.2.1. Conduct a cost-benefit analysis to evaluate different options for the development of multi-purpose water facilities.

Activity 2.2.2. Construct or rehabilitate multifunctional infrastructures and irrigation systems at sensitive ponds, *koris* and shallow waters in the targeted areas.

[50] Artificially created slope around a field. The technology evacuated excessive rainfalls and maintains stable levels of soil humidity.

Activity 2.2.3. Organize advocacy workshops and undertake knowledge sharing activities to educate the population on disaster risk management (related to floods and droughts).

Component 3: Fostering evidence-based water policy decisions

Outcome 3: Establish evidence-based knowledge to inform policies and investments on adaptation in the water sector

Co-financing amount for Outcome 3: US$ 3,300,000

LDCF project grant requested for Outcome 3: US$ 977,297

Without LDCF intervention (baseline situation)

87. In December 2012, the SE/CNEDD set up a coordination framework for integrating the climate change into Niger's policy planning. However, the provision of scientific information is weakly institutionalized to support evidence-based policymaking. The use of knowledge on adaptation in development policy dialogues and decision-making remains limited due to many obstacles and barriers. This can be explained by several reasons such as policymakers' low level of scientific understanding, a limited interest or knowledge of policy makers in climate change challenges, the limited dissemination of research results, a lack of incentives to use information on adaptation in development policy making, and the lack of institutional channels for mainstreaming adaptation information into policies.

88. However, some lessons learned can be capitalized as part of the NAP process. This is the case of the project for the Improvement of Food Security and Farmer's initiative valorization in the High Social and Environmental Risks Areas of Niger (ZARESE II), that has the objective to contribute to the restauration of production systems to improve the living conditions of climate change vulnerable population and reduce migrations. This will be achieved with the introduction of improved agricultural practices, in particular better water systems and management. Out of the total budget of US$ 3,767,726 financed by the AICS, the Niger Government and the beneficiaries, US$3,300,000 is proposed as in-kind co-financing.

89. Under the baseline scenario, integrating science and better assessing the impacts of climate change will be difficult to achieve. The absence of an efficient monitoring and evaluation (M&E) framework will impede scientific knowledge to be effectively shared with policymakers in a timely and appropriate manner. Also, no evidence-based knowledge system will be put in place to guide adaptation policies and investments. This will result in a perception of high investment risk for CCA practices and infrastructures in the water sector, leading to a disinterest from the private sector.

With LDCF intervention

90. Under the alternative scenario, the data collected under the output 1.3 will facilitate access to a range of information showing the needs of local communities in terms of adaptation to climate change. The data will inform decision-makers on a series of socio-economic benefits of these adaptation strategies, such as improved access to health and education. The visual representation and accessibility of this data can help to engage policy-makers, the private sector, and the international community in a vital step towards developing adaptation policy that will reduce the vulnerability of local communities.

91. Gender issues will be considered within all the decision-making processes of Component 3, thus ensuring a participation and consideration of women within the community platform and monitoring plans. This will include integrating women's perspectives and making use of their specific knowledge of adaptation, as well as local survival strategies.

92. Furthermore, under this outcome as well, the LDCF interventions will be aligned with the GCF NAP project, in particular the following activities: (i) 1.2: Identifying available information on climate change

impacts, vulnerability and adaptation, and assess gaps, (ii) 4.1: Enhancing capacity to monitor the NAP process and adaptation progress; Conduct outreach on the NAP process and report on progress and effectiveness and, (iii) 5.3: Conduct studies or research programmes to estimate future investments in adaptation in all sectors.

Output 3.1: Tailored information services and products on water are set up to respond to the private sector and decision-makers audience needs

93. Key messages will be developed, taking into account the audience needs, operating language, objectives, timeframe, contacts and media of communication. Regular dialogues will be organized to promote greater interactions, discussions and deliberations between researchers, private sector, policy-makers and the general public on adaptation responses offered by IWRM practices. These dialogues will be organized in the framework of the overall NAP process, in liaison with the GCF NAP support initiative, and under the leadership of the CNEDD and the CNEA. They will build on the results of IWRM adaptation practices identified and developed under outcomes 1 and 2, and the strategy to leverage private sector finance to be elaborated by the GCF NAP support project. Policy briefs will be generated from the findings and shared with policy makers and private actors through different platforms including local, national and regional policy dialogues. These dialogues will also be useful to foster engagement of key stakeholders in climate change adaptation in the water sector.

94. This output will support the definition of new and updated climate change adaptation engagements and priorities of Niger at the international level to support the preparation of international negotiations and define Niger's positions on climate change. These discussions and the identification of national priorities will provide an up-to-date framework of investment for future climate change adaptation projects and programmes that will address most urgent needs in the water sector. This will be identified through extensive consultations at the national and local level and translated into policy briefs and the Niger Position Paper on climate negotiations for the water sector.

Activity 3.1.1. Organize regular dialogues for a better coordination and interaction on IWRM adaptation responses with the several stakeholders: private sector, policy-makers, researchers, civil society and universities.

Activity 3.1.2. Issue policy briefs from the findings, to be shared during several meetings with policy makers and private sector actors at local, regional and national levels.

Activity 3.1.3. Organize consultations workshops to discuss and deliberate about the future general plan for Niger in terms of climate negotiations for the water sector.

Activity 3.1.4. Support the drafting and validation of the Niger Position Paper on climate negotiations, taking into considerations findings from IWRM adaptation responses.

Output 3.2: Knowledge management and M&E systems are established in the water sector

95. A NAP M&E system is expected to be established by the GCF NAP support project and the PARC /DAD project, following a mapping of existing monitoring and evaluation systems. The project will contribute to set up the NAP monitoring and evaluation (M&E) system for the water sector. It will be completed and handed over to the SE/CNEDD which host the NAP M&E system and will serve as a learning tool for generating evidence-based data and information to inform policy making and future planning processes in the water sector. This will include the development of standard indicators and a detailed framework for a consistent monitoring of climate change impacts on key environmental and socio-economic aspects. This will ensure the effective and reliable observation of changes on CC causes and impacts. Based on the climate change impacts identified under the monitoring plan in activity 3.2.1, and the data managed and stored in the online community platform under output 3.3, adaptation priorities will be continuously identified and defined in the water sector. Each adaptation priority will be associated to standardized climate indicators that will enable the formulation of measurement methods to consistently assess the performance of investments (including the benefits they will have on a number of socio-economic factors, ie. increased revenues, improved health, increased access to education), to monitor progress on CCA/CBA against the baseline situation, and to update national adaptation plans. This will enable a continuous update of the community

platform with the provision of lessons learned and best practices and the use of standardized advocacy tools, products, and methods to publish information on costs and impacts of climate change, but also reports on progress and effectiveness of CCA practices.

96. The monitoring plans, advocacy tools, products and methods of measuring costs and impacts of climate change will be designed during the first meetings, jointly with the GCF NAP project and all the stakeholders. It will also be necessary to set up an evaluation framework to assess whether interventions are efficient or not and adapt them if necessary. This framework will be important for extracting the success stories and lessons relevant to the plannings processes: NAP and PDES. In addition, a methodology could be developed for evaluating possible investment options for adaptation in the water sector using information from project experiences. To conduct this evaluation, the impact evaluation framework established under the activity 3.2.2 could be used. This methodology could be extended to other sectors covered by the GCF NAP project.

Activity 3.2.1. Develop monitoring plans to measure CCA causality and impacts on the water sector.

Activity 3.2.2. Develop a process to continuously define adaptation priorities in the water sector based on the identified climate change impacts and set up an impact evaluation framework to assess the efficiency of the interventions.

Activity 3.2.3. Set up standardized definitions and measurement methods for climate indicators on water to consistently assess the performance of investments in the water sector, to monitor progress on CCA/CBA against the baseline situation, and to update water-related national adaptation plans

Activity 3.2.4. Develop advocacy tools, products and methods to publish costs and impact information and reporting on progress and effectiveness of adaptation actions taken in the water sector.

Output 3.3: An online community platform is implemented

97. An online community platform will be set up to foster partnerships between local authorities and beneficiaries, to enable them to assess progress made, and support the scaling up of local experiences, through the availability of options impact assessments and appraisal. Under this project, such partnerships will be extended to research institutions intervening in the water sector, including local and international research centers, in order to support the performance and impact assessments in the intervention sites, using the impact evaluation framework established under the output 3.2.

98. It is expected that the SE/CNEDD, coordinating this platform, will facilitate its expension to other vulnerable sector, therefore paving the way for the NAP process, and the sectoral NAPs. Adequate trainings will be designed and provided to the partners to efficiently perform reviews and identify options and opportunities for scaling-up. This platform, by receiving inputs from stakeholders on innovative climate change adaptation approaches and practices for sustainable water management, as well as thorough reviews of these options, will be an open source database between all the actors to reinforce the multilateral communication and provide up to date information for the widespread upscaling of successful adaptation practices, including by building on the activities conducted under the Outcome 2.

99. This platform will also be informed by the platform developed under the PDIPC for sharing and analyzing meteorological information. For instance, by sharing information and gathering knowledge, it will highlight success factors of local experience in PDCs and Local Water and Sanitation Plans (PLEA). Based on the assessment of the potential, opportunities and lessons learned from intervention sites and project investments, including from the private sector, this output will also support the development of a strategy for the scaling up of succesful initiatives. These lessons learned will feed into the strengthening of the institutional framework, supported under the Outcome 2. This will require to implement the following activities:

Activity 3.3.1. Set up and on-line community platform.

Activity 3.3.2. Set up a training program for users to review adaptation options and identify opportunities for scaling-up.

Activity 3.3.2. Facilitate consideration of success factors of local experience in PDCs and PLEAs by using the M&E framework established under the output 3.2.

Activity 3.3.3. Develop a scaling-up strategy for successful initiatives.

IV.3 Partnerships

100. The project will also put an emphasis on the creation of partnerships at the national and regional level to ensure the sustainability of the actions. In addition, some of the projects listed in the table below will provide co-financing, the amounts are indicated in the first column. It will capitalize and create synergies with past and existing CCA-related projects such as:

Name / Lead Institution / Lessor / Budget	Basic information	Relevance to the proposed project	Opportunities / complementarities
Advancing medium and long-term adaptation planning and budgeting in Niger **Responsible institution**: UNDP, Executive Secretariat of the National Council on Environment for Sustainable Development (SE/CNEDD) **Implementing entity:** Executive Secretariat of the National Council on Environment for Sustainable Development (SE: CNEDD), Ministry of Water and Environment, Ministry of Planning and Finance **Budget**: US$2.9 million **Donors**: GCF **Closing date**: Total proposal period is for 4 years: 2018 – 2022 **Co-financing:** US$2,667,282	This project is planning a range of actions to address to address the main barriers that hinder CCAA mainstreaming into planning in Niger: Limited institutional, functional and technical capacity; Constrained financial, human and material resources; Limited synergies and coordination among climate adaptation initiatives; Weak monitoring and evaluation mechanisms; and Insufficient data availability, reliability and management. It covers 5 sectors.	The GC NAP Support project will establish intersinstutional coordination and M&E mechanisms at the national national, level, develop planning and budgeting tools, strengthen technical capacities on adaptation planning, and generate knowledge management products and information.	The two projects are complementary in terms of activities and sectoral coverage. The unique institutional anchorage of the two projects, the CNEDD, and the unique implementing partner UNDP will facilitate the establishement of synergies between the two initiatives. The two projects will work jointly to establish coordination mechanisms (Output 1.1), develop training modules on (output 1.2), set up Data collection/production, information and communication mechanisms (output 1.3.), integrate CCA inti planning and budgeting frameworks (Output 1.4), and generate evidence-based water policy decisions (Outcome 3)

The Economic and Social Development Plan (PDES) **Responsible institution**: National Government **Implementing entity**: National Government **Starting date**: 2017 **Closing date**: 2021	The Economic and Social Development Plan (PDES) for the period 2017-2021 is the unified development framework of the country. It can facilitate the promotion of adaptation in sectoral policies and strategies. It is the First five-year plan to operationalize the Sustainable Development and Inclusive Growth Strategy (SDDCI) Niger 2035 adopted by the Government on 9 May 2017	Its Priority Action Plan includes a budget line for the promotion of CCA and CCM measures. The PDES is organized around five major areas that are cultural renaissance, social development and demographic transition, accelerating economic growth, improving governance, peace and security, and sustainable environmental management. It dedicates a whole program to the improvement of development management.	The project will guide the PDES towards CCA mainstreaming, as well as addressing water issues and increasing agricultural benefits, by implementing CCA water actions as the irrigation of numerous ponds,and enhancing the resilience of the agriculture and livestock production (outcome 2).
Improvement of Food Security and Farmer's initiative valorization in the High Social and Environmental Risks Areas (ZARESE) of Niger (ZARESE II) **Responsible institution:** Helvetas Swiss Intercooperation **Implementing entity:** Ministry of Hydraulics and Sanitation **Starting date:** 2018 **Closing date:** 2022 **Co-financing :** US$3,300,000	The general objective of the project is to contribute to the restoration of production systems in order to improve the living conditions of populations vulnerable to climate change and reduce migration.	In a Sahelian context, water management is a key concern for production systems. Water-related adaptive techniques, including spreading thresholds, development of ponds, etc. are providing a solution to climate change for the agriculture sector. The project also works with local communities to improve the protection of their rights on natural resources (including by revising CDPs) and capacitating them on adaptive techniques.	By informing local beneficiaries about and protecting their rights on natural resources, the project enhances their ownership of the activities. This is a useful lesson learned for the development of a NAP (outcome 1), but also for the formulation of on-the-ground activities (outcome 2). If successful, these practices could be applied in the NAP project.
Support programme for the water and sanitation sector (PHRASEHA II) **Responsible institution:** Helvetas Swiss Intercooperation **Implementing entity:** Ministry of Hydraulics and Sanitation **Starting date:** 2018 **Closing date:** 2022	The objective of the project is to contribute to the improvement of the access to sustainable services of drinking water provision and basic sanitation, by strengthening the capacity of the sectoral actors	The project will focus on the regions of Dosso and Maradi for the improvement of governance and access to water for drinking and sanitation.	The project, including the experience collected during the phase I of the project, will be relevant to the implementation of activity 1.1.4 for the identification and appraisal of on-going water-related climate change adaptation options. These options and experiences will also feed into the outcome 1, by guiding the development of planning and budgeting frameworks in the water sector as well as informing the development of the Water-NAP.

Second phase of the project "water for growth and poverty reduction in the Mekrou sub-basin in Niger" **Donors:** European Commission **Responsible Institution:** Global Water Partnership Afrique de l'Ouest (GWP-AO) **Implementing Entity:** Ministry of Hydraulics and Sanitation (MHA) **Starting date:** 2020 **Closing date:** 2023 **Co-financing :** US$1,100,000	The objective of the project is to support green economic growth and poverty reduction in the Mekrou River basin and its area of influence through integrated and concerted water management in developing areas	The project will provide lessons learned and capacity building at the national and local level on the improved management of water resources.	The project is supporting the implementation of regulations at the natioanl level, such as the PANGIRE by improving the availability of data on groundwater resources and strengthening the capacity on IWRM. The project also intervenes in a regional context, with the alignment with cross-border schemes (Directing Scheme for Planning and Management of Water - SDAGE). The lessons learned for cross-border work will be highly relevant for the development of the NAP on Water (outcome 1).
Integrated Programme for Development and Adaptation to Climate Change (PIDACC) – Niger, Phase II **Donors:** GCF **Accredited Entity:** African Development Bank **Implementing Entity:** Ministry of Hydraulics **Starting date:** 2020 **Closing date:** 2025 **Co-financing :** US$24,300,000	The objective of the project is to contribute to the improvement of the resilience of ecosystems and populations through the sustainable management of natural resources. It promotes the sustainable use of natural resources in the Basin to ensure the protection of existing water resources and their ecosystems, supporting an ecosystem-based adaptation.	The national component of the PIDACC in the Niger Basin will also provide important knowledge, in particular regarding the management of water at the regional level, with lessons learned from the Niger Basin.	The project will be particularly relevant for the outcome 1, by providing important knowledge for cross-border cooperation for water resources. This could be integrated into the NAP-Water for a larger impact through the adoption of a regional approach. On-the-ground techniques will also provide inputs and lessons learned for the activities conducted under outcome 2.

The Climate-Smart Agriculture Support Project **Responsible entity**: World Bank **Implementing entity**: Ministry of Agriculture **Budget**: US$ 111 million **Donors**: World Bank **Starting date:** May 26th 2016 **Closing date**: December 31th 2022	The objectives of the Project are: (i) to enhance adaptation to climate risks, (ii) to improve agricultural productivity among the Targeted Communities and (iii) in the event of an Eligible Crisis or Emergency, to provide immediate and effective response to said Eligible Crisis or Emergency. Project direct beneficiaries are estimated at about 500,000 farmers and agro pastoralists who will benefit from integrated commune sub-projects. Producer organizations, women, youth, and vulnerable groups, and micro small and medium enterprises will also directly benefit from the project activities. It is anticipated that 40 percent of the total direct beneficiaries will be women. The project intervention area covers the regions of Dosso, Maradi, Tahoua, Tillabery, and Zinder	The project funded by the World Bank is supporting a better management of the agriculture in some targeted communities. Some of the concerned communities are the same as this proposed project: Tahoua, Tillabery and Zinder. Hence, this World Bank project is supporting the future actions of this proposed project by completing the objective of increasing resilience of these regions thanks to the plan of Eligible Crisis or Emergency.	The proposed project will capitalize on lessons learnt from the formulation process of the Eligible Crisis or Emergency plans in the regions of Zinder, Tahoua, and Tillabery which are the proposed project coverage area. Lessons learnt from this process will inform the formulation of the Local Water and Sanitation Plans (Output 3.3). The Climate-Smart Agriculture Support Project will gain from information generated by the climate vulnerability assessment of targeted communes (Output 1.3)
The **European Union (EU) funded project – under the Global Climate Change Alliance (AMCC) on climate resilience support for a sustainable agricultural development (PARC-DAD)** **Responsible entity**: Global Climate Change Alliance (AMCC) **Implementing entities**: Ministry of Finance, Ministry of Environnement, Local governments of Dosso and Zinder, high commissioner's office **Donors**: European Union **Starting date**: 05/2015 **Closing date**: 05/2020	. The specific objective is to enhance the capacity of national actors at various levels to manage food and nutritional security and agricultural development in a more integrated, sustainable and climate-resilient manner. The expected results include both local / regional and central level are the following:At the local level, in the target areas of Dosso and Zinder, field actions should help to strengthen the agro-forestry-pastoral production and sustainable land management and ecosystems with a view to increase resilience to climate risks.	The project supports (i) the integration of climate change in the municipal development plans (PDC) in targeted municipalities of Zinder, one the proposed project target region, and (ii) the design and effective implementation of a comprehensive system of monitoring and evaluation of initiatives related to climate change.	Experiences capitalized by the population and local decision-makers during the PDC mainstreaming process, will facilitate the development of climate sensitive PLEA by the proposd project and vice-versa. The implementation of the M&E system will benefit of specific support for the water sector provided by the proposed project

The **Programme for rural development and productive agriculture: promotion of productive agriculture (PROMAP)** **Responsible entity**: Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) **Implementing entities**: Ministère du Plan, de l'Aménagement du Territoire et du Développement Communautaire **Donors**: German Federal Ministry for Economic Cooperation and Development (BMZ) **Starting date**: 2016 **Closing date**: 2018	The objective of the project is to exploit the economic potential of small-scale irrigation in the Niger's agricultural sector. The project targets the regions of Agadez, Tahou and Tillabery.	The project is supporting the development and implementation of an appropriate small-scale irrigation policy, and will provide training on improved agricultural practices to private and public agricultural service providers, enabling them to offer farmers professional advice. These agricultural service providers can subsequently help interested farmers to develop technical and business aspects of their farms or cooperatives.	The PFNAC will build on the results of the PROMAP, in particular the policy on small-scale irrigation that will facilitate the up-scaling of irrigation practices introduced under the LDCF project. In addition, the strengthening of agricultural practices is complementary to the improved access to water for agriculture. The PFNAC could engage with the trained private and public providers to disseminate good practices in the targeted villages for multiplied adaptation benefits.
The **Programme for Small Irrigation and Food Security (PISA)** **Responsible entity:** Kreditanstalt für Wiederaufbau (KfW) **Implementing entities:** Ministry of Agriculture **Donors:** KfW **Starting date:** January 2016 **Closing date:** December 2019	The objective of the programme is to contribute to the promotion of productive agriculture and food security in Niger. More specifically, it aims to increase agricultural production, improve the income of family farms, and facilitate access to the market for agricultural products. The main expected results of PISA are, first, the development, rehabilitation, equipment and development of small-scale irrigation infrastructures and their sub-watersheds; the improvement, storage and conservation of agricultural products, and access to markets; and the sustainability, development and maintenance of rehabilitated areas.	By promoting small-scale irrigation, the PISA will produce lessons learned that will be useful to the LDCF project. The increased revenues of family farms will also provide a strong basis for investment in further irrigation equipment.	The LDCF project could work with the PISA to advocate for the dissemination of lessons learned and trainings to targeted villages through the training of additional extension services. As both projects are intervening in similar regions (Tahoua et Tillabery), the improved knowledge of extension services can ensure the dissemination of lessons learned from both projects to each other's sites.

101. The project will also build on the lessons learned of the following closed projects:

Scaling up Community-Based Adaptation (CBA) in Niger: Large-scale Transposition of Community Adjustment in the Maradi Region **Responsible institution:** UNDP, **Implementing entity:** SE / CNEDD **Budget:** US$4,876,000 **Donors:** UNDP, GEF-LDCF**,** Government of Niger **Period:** 2014-2018	The project ensured the integration of climate issues into development plans and strategies at the local and regional levels, by creating the capacity to adopt and to implement agricultural and rural systems as well as adaptable measures, guided by reliable technical advice on climate and agriculture, and strives to support a process to create more climate-resilient economies.	Thanks to the project, the capacities of the municipal authorities will be strengthened with regard to climate change. Local development plans will be revised to integrate climate change, using the guide and methodology developed by CNEDD.	The project is a good entry point for integrating climate change into local development plans. Project experiences will be capitalized, for the elaboration of the local drinking water supply and sanitation plans, integrating CCA considerations (output 3.3).
Climate Information and Prospective Development Project (PDIPC) - Pilot Program for Climate Resilience (PPCR). **Responsible institution:** Min. of Community Development and Land Use Planning and (MDC/AT) **Implementing entity:** Directorate of National Meteorology (DMN / Min of Transport) **Budget:** US$15,000,000 (US$11,000,000 loan, US$4,000,000 grant) **Donors:** AfDB, IFC **Period:** Project approval July 2012 / Closing date October 2018	The project is part of Niger's PPCR and aims to (a) improve the quality of climate information and products, (b) improve climate modeling, prediction, and information dissemination, making it available to key users (in this case, farmers and pastoralists) in a way that they can easily understand it, and c) strengthen the EWS (early warning system) and develop an electronic platform for sharing and analyzing meteorological information.	The quality and availability of climate information is crucial in the NAP process This project focuses on building the capacity of the National Meteorological Directorate which plays a central role in providing climate information, climate data and conducting vulnerability analyzes and designing vulnerability scenarios.	The LDCF-funded project will back on the climate information platform established, to support the the climate vulnerability assessment of targeted communes (Output 1.3). Climate information generated by the proposed project could also inform the electronic platform established under the PDIPC initiative. The two projects will work jointly to develop training modules on (output 1.2)

Implementation of NAPA priority interventions to build resilience and adaptive capacity of the agriculture sector in Niger **Institution responsible**: UNDP **Executing entities**: SE/CNEDD, municipalities, Ministry of Agriculture, Ministry of Water **Budget**: $8.1m **Donors**: Global Environment Facility – Least Developed Countries Fund (GEF-LDCF), Canada, UNDP, Government **Projet period**: 2010 - 2015	The project focused on activities at local level, where it has played a key role in eight communes in eight different regions of Niger in raising awareness of climate change and in enhancing resilience through income-generating activities (IGA) and more resilient agricultural techniques in particular. The new phase of the project, under Canadian funding, focuses on further strengthening the livelihoods of local population and on disseminating best practices.	Through the project, stakeholders have been trained on climate change at local level, and the capacities of[2] the municipalities' authorities have been built with regards to climate change and management. The local development plans have been revised to mainstream climate change, using the guide and methodology developed by the CNEDD.	The project collected and analysed information, experiences, and lessons learned to produce and disseminate knowledge that can be shared and usefully applied in other contexts. This project could provide entry points for scaling up opportunities under the NAP process.
Water Resources Mobilization and Development Project (PROMOVARE) - Pilot Program for Climate Resilience (PPCR). **Responsible institution**: Min. of Planning, Land Use Planning and Community Development (MP / AT) **Implementing entity**: Directorate of National Meteorology (DMN / Min of Transport) **Budget**: US D 25 million (US D 15 million loan, US D 10 million grant) **Donors**: AfDB, IFC **Period**: Project approval April 2012 / Closing date June 2018	The project will contribute to strengthening the resilience of the population at the level of the targeted communities, through the control of water for agro-pastoral activities. This project will operate in ten communes, namely Abalak, Afala, Agadez, Baleyara, Illelera, Kaou, Loga, Ouallam, Sukututan, and Tabelot.	Relevant activities: (i) Construction and rehabilitation of mini-dams, furrow irrigation systems, and development of irrigated perimeters for the development of an area of 1,023 ha; (ii) watershed protection; and (iii) capacity building of producers to adopt resilient technologies and practices.	The proposed project will capitalize on lessons learnt from the PROMOVARE project, in particular during the design and implementation phases of the IWRM practices and techniques, (Outcome 2). taking into account constraints and opportunities related to the national context

Implementing NAPA Priority Interventions to Build Resilience and Adaptive Capacity of the Agriculture Sector to Climate Change (GEF ID 3916) **Responsible entity**: GEF-funded NAPA **Implementing entity**: National Council for Environment and Sustainable Development **Budget**: US$ 7 million **Starting date**: March 2009 **Closing Date**: April 2013	The project included a set of measures to enhance adaptation of the agriculture and water resources sectors to address urgent and anticipated climate change impacts.	The project has developed a series of successful adaptation measures and practices in the sector of agriculture.	The proposed project collected and analysed information, experiences, and lessons learned to produce and disseminate knowledge that can be shared and usefully applied in other contexts. This project could provide entry points for scaling up opportunities under the NAP process. Adaptation measures and techniques developed by the project will be capitalized by the proposed project during the design and implementation of water adaptation techniques for agriculture (Outcome 2).
Integrating Climate Resilience into Agricultural and Pastoral Production for Food Security in Vulnerable Rural Areas through the Farmers Field School Approach (GEF ID 4702) **Responsible entity**: FAO **Implementing entities**: Ministry of Agriculture and Husbandry (MAE) in collaboration with the SE/CNEDD, the Ministry of Territory Plan, Ministry of Environment (ME) and Secretariat of the Rural Development Strategy (SDR) **Budget**: US$ 3.8 million **Donors**: LDCF, Ministry of Agriculture **Starting date**: June 2012 **Closing date**: 2016	The project contributed to the integration of climate resilience into agricultural and pastoral production for food security in vulnerable rural areas of Niger through the Farmers Field School.	This LDCF project addressed the need for developing proven and cost-effective outreach and extension approaches and methods in order to allow for an effective up-scaling of CCA strategies and practices, required to ensure increased climate resilience of Niger's key agricultural and agro-pastoral production systems, and lessen the vulnerability to climate change of on-going and future investments in the agro-pastoral sector.	The proposed project will capitalize on lessons learned, from the implementation of Farmers Field School, in paticular methods used and their efficiency, for the development of hybrid village water systems and multipurpose infrastructures Outcome 2).

IV.4. Stakeholders' engagement

1. The implementation strategy for the proposed LDCF project includes extensive stakeholder participation. The stakeholder's involvement during the implementation phase are provided in the table below. More details are available in Annex L – Stakeholder engagement plan.

2. Relevant partners, particularly in the framework of multilateral (WB, ADB, EU) and bilateral (GIZ) cooperation, as well as regional entities (ACMAD, AGRHYMET) will be invited to participate in consultations and provide technical support.

3. The Executive Secretariat of the National Council on Environment for Sustainable Development of Niger (SE/CNEDD): As the main national body in charge of monitoring the implementation of the UNFCCC, the SE/CNEDD is in charge of promoting the integration of CCA into economic and social development strategies, plans, programmes and projects. The SE/CNEDD will be Implementing Agency and chair the Project Steering Committee (PSC). It will be in charge of the coordination and implementation of each activity to contribute to the success of the project's actions and impacts. The SE/CNEDD will ensure the coordination between project stakeholders and ministries involved and that all activities implemented are in line with the rationale of sustainability and gender equality.

Outcomes	Outputs	**Institutions**
Institutions of coordination, sensitization, resource mobilization, and impetus for reforms and monitoring and evaluation of effects and impacts		
OUTCOME 1 Integrate climate change adaptation in relevant water-related budgeting and planning frameworks at national and local levels	**1.1 CCA is integrated into national and local budgeting and planning frameworks, especially for the water sector**	Departments for Rural Development Ministry of Finance Cellule Eau-Environnement ; Cellule Agriculture-Elevage Ministry of Agriculture and Livestock
	1.2 National, subnational and local stakeholders are trained on mainstreaming CCA practices for enhanced and sustainable water resources management	Governor Executive Secretary of the CNEDD Ministry of Environment and Sustainable Development (ME/DD) Ministry of Agriculture and Livestock Ministry of Finance National Directorate of Meteorology Ministry of Hydraulics and Sanitation Ministry of Planning 3N Initiative High Commission 3N Regional Coordination Unit
	1.3 Good CCA practices and information is shared between stakeholders to facilitate the implementation of the sectoral NAP	Governor Regional Council Regional Directorates of Planning, Community Development, Agriculture, Environment, Livestock, Hydraulics and Scientific Research (INRAN) Communes Prefectures National Directorate of Meteorology
	1.4 Campaigns are launched to inform and sensitize CCA and water resources management, and awareness is raising among the population on the effects of climate change on water resources	Commune National Directorate of Meteorology Ministry of Population, Child Protection and Advancement of Women Universities of Tahoua, Tillabéry et Zinder de Maradi

OUTCOME 2 Disseminate economically sustainable hybrid village water systems and multi-purpose infrastructures	**2.1 Hybrid household water supply solutions and smallholder irrigation systems are successfully pro-moted in vulnerable communities**	Regional Directorates of Planification, Community Development, Agriculture, Environment, Livestock, Hydraulics and Scientific Research (INRAN) Ministry of Hydraulics and Sanitation Ministry of Agriculture and Livestock Governor
	2.2 Climate-smart water facilities are installed in the targeted sites	Prefecture 3N Initiation Regional Coordination Regional Council National Directorate of Meteorology
OUTCOME 3 Establish evidence-based knowledge to inform poli-cies and investments on adaptation in the water sector	**3.1 Tailored information services and products on water are set up to respond to the private sector and decision-makers audience needs**	Ministry of Hydraulics and Sanitation Ministry of Environment and Sustaina-ble Development (ME/DD) Governor Universities of Tahoua, Tillabéry et Zinder de Maradi Communes
	3.2 Knowledge management and M&E systems are established in the water sector	I 3N High Commission Ministry of Hydraulics and Sanitation Ministry of Environment and Sustaina-ble Development (ME/DD) Governor Universities of Tahoua, Tillabéry et Zinder de Maradi I 3N Regional Coordination
	3.3: An online community platform is implemented	Ministry of Hydraulics and Sanitation Ministry of Environment and Sustaina-ble Development (ME/DD) Ministry of Agriculture and Livestock Ministry of Population, Child Protection and Advancement of Women Regional Directorates of Planification, Community Development, Agriculture, Environment, Livestock, Hydraulics and Scientific Research (INRAN) Communes

PROJECT IMPLEMENTATION	Governor Regional Coordination of the Initiative 3N Executive Secretariat of CNEDD (Rio Conventions Focal Point) Ministry of Environment and Sustainable Development (ME/DD) CNEA Ministry of Hydrolics and Sanitation Ministry of Planning Communes I 3N High Commission

Table 2: Matrix of stakeholders' participation

4. The stakeholder involvement strategy will target stakeholders in the project's sites in order to be in line with the process of decentralization and transfer of competencies of sectorial ministries to local territories.

At project start:

5. This phase requires information and awareness-raising activities for stakeholders. These actions will aim to inform stakeholders on the issues, objectives, and project activities, as well as about their positive and negative effects and the measures proposed to mitigate and/or optimize these effects, and finally to inform them on the mechanism provided for their effective involvement in the project.

6. In practice, a series of briefings and awareness-raising workshops will need to be organized in the framework of the project for target communities in target villages. These meetings will bring together not only the traditional authorities (chiefs), but also local elites and local politicians (MPs, mayors). The gender aspect must be taken into account by ensuring the representation of women, young people, and all social strata. These briefings will be organized in collaboration with local administrative authorities.

During the implementation phase:

7. The involvement of local communities in the implementation of project activities will be achieved by (i) prioritizing local people for project recruitment and permanently strengthening their capacities to prepare for the post-project phase, and, (ii) establishing partnerships with local organizations already working with communities (NGOs, CSOs, associations) in the implementation of project activities under the project and building their capacity to achieve better results.

8. At the local level, the project will establish a multi-stakeholder platform, which will include representatives from the following organizations: local NGOs, women and youth associations, local authorities, and famers' associations. In the project area, the project will facilitate the establishment of a platform composed of local elected MPs, senators, and mayors. At the regional level, the project will establish a governance platform, which will be chaired by each Governor and will be composed of various heads of departmental services, the private sector, NGOs, and elected representatives.

9. The project will also put an emphasis on the creation of partnerships at the national and regional level to ensure the sustainability of the actions. It will capitalize and create synergies with past and existing CCA-related projects

IV.5 Gender equality and empowering women

10. In 2014, the Nigerien population was estimated at 18.2 million people, 52% of whom were women (in Tondikiwindi 50,26%; Ouallam 51,71%; Tenihya 51,55%; Taknamat 50,9%; Tchintabaraden

50,09%; Kao 50,90%; Tabalak 50,38%). The country encourages gender equality and women's rights: the Nigerien Constitution grants equal rights regardless of gender, and Niger ratified both the Convention on the Elimination of All forms of Discrimination against Women (CEDAW) in 1999 and the Optional Protocol on violence against women in 2004[51]. Niger has also signed but not ratified the Protocol to the African Charter on Human and Peoples' Rights on the Rights of Women in Africa and set up a Ministry of Social Development, Population, Advancement of Women and Protection of Children since 1998. In spite of those political efforts, women's empowerment in Niger remains extremely limited; the country is ranked 157 out of 159 in the Gender Inequality Index.

11. In Niger, women have a major role in agriculture production, as a major actor of the agricultural labor force, performing most of the agricultural tasks[52]. Women are in charge of corn, bean, and case crops (groundnuts, okra, sesame) as well as market crop cultivation. Women's agricultural livelihoods are relatively low compared to men, because they generally face more severe constraints than men in accessing productive resources (land, agricultural inputs, technologies, credits, etc.). This vulnerability is further exacerbated by the high dependency of the sector on rain-fed agriculture inducing serious implications on women and their households in the case of severe weather disruptions such as drought and flood. Drought-induced yields reduction and water scarcity prevent women from generating income to provide food to their households and forces them to go farther and longer in search of water despite insecurity. The decrease in water points and grazing land is also forcing pastoralists to move farther away with their livestock, and the family is then left entirely to the woman's responsibility. This situation has many negative implications for the livelihoods of women and for their households, especially female-headed, which comprise 32% of the households in Niger. Considering gender issues when addressing the resilience of rural communities to climate change is therefore essential. According to UN Women, it is estimated that if the gender gap in agricultural productivity in Niger is closed, there would be an increase in crop yields of 10% to 30% per annum and an additional GDP increase of about 0.25% annually. This would translate into a financial gain of approximately US$ 17 million per year, an amount which could lift over 25,000 Nigeriens out of poverty.

12. The project will ensure that women and the youth benefit directly from the activities and infrastructures that will be put in place. Component 1 will give women access to trainings and workshops on resilient water resources management practices and benefits. This will reduce the existing gender gap on technology access and agricultural productivity and result in women empowerment and a lightened workload. These results will also be obtained with the Component 2 and the development of climate-resilient water systems. This will significantly reduce the impacts of droughts on agricultural yields and water scarcity hence reducing the length of women's often dangerous daily journeys to fetch water and the threats of food insecurity caused by crop loss. As a result, women and youth will have more time available for other activities, whether it is income-generating activities or the participation to the citizen life of their village or to access education. Gender issues will finally be considered within all the decision-making processes of Component 3, thus ensuring a participation and consideration of women within the community platform and monitoring plans. This will include integrating women's perspectives and making use of their specific knowledge of adaptation, as well as local survival strategies.

13. Consequently, by diminishing water-related issues and agricultural gender gap, the project will lead to an improvement of women and therefore household livelihoods and to women empowerment with education and visibility in decision-making processes. The project has therefore been carefully designed to maximize the potential for contributing to women's empowerment and for gender mainstreaming. It will consider gender issues to ensure equal participation of men and women in decision-making processes, and in the implementation of adaptation activities. The project team will also ensure that these activities do not exacerbate gender inequalities.

[51] http://indicators.ohchr.org/
[52] Report on rural engineering in Niger by DJIBO Niandou in November 2017

14. Finally, the project is based on the principle that gender mainstreaming will lead to more resilient communities and therefore more successful adaptation. It will ensure the participation of the most vulnerable groups, including women and youth, in the document preparation process and will also ensure that they are the main beneficiaries of the investments made under Component 2.

IV.6. South-South and Triangular Cooperation (SSTrC)

80. This project will help promote South-South and Triangular cooperation as the GoN will be able to share the knowledge, expertise and the skills that it has acquired through this project to neighboring countries that face similar climate challenges relating to water (such Mali, Nigeria, Tchad and Benin). This can also take place at a regional level through the regional organizations that Niger is part of (such as the Economic Community of West African States). From a national perspective, other countries with similar water-related climate change issues will be able to build or improve their national policies and/or strategies on this topic and learn from Niger's experience. The training that Nigerien government officials will have received can also be passed on to other government officials in the region. From a private perspective, this will materialize in the increased trade, flows of direct investment, sharing of solutions and experts.

81. Overall, it is expected that this project is going to benefit a wider number of people than simply Niger's rural population will benefit from this project.

IV.7. Sustainability and Scaling Up

82. The project has been designed to have a sustainable impact, at the local as well as the national level. The project addresses the key priorities of national development, as seen above. The project benefits from strong institutional backing, which will ensure its sustainability. The strong commitment from all stakeholders at every level – from Ministries down to the Municipalities and villages – will enable the good implementation and execution of projected activities and the integration of adaptation in Niger's long-term policy, plans, and national budgets. As local interventions are guided by local needs and demand, sustainability will be ensured, and adaptive capacities will be built up and enforced.

83. The integrated approach adopted for the project design also supports its sustainability: the three components complement and reinforce each other mutually. In this way, measures taken to reduce vulnerability to the adverse effects of climate change and those aimed at increasing the ability to adapt to the effects of climate change are mutually reinforcing, thus increasing the incentives for sustainability over time.

84. The establishment of Water Users Committees, including women, herders, and farmers and the development and implementation of integrated landscape management plans for adaptation and vulnerability reduction is a highly innovative action in Niger, where the depletion of available natural capital is boosting urban migration at unprecedented proportions. Another innovative measure of the LDCF intervention is the empowerment of rural communities to better deal with extreme climate events and hazards. Communities and local entrepreneurs will contribute to the project, not only by investing their time and facilities but also providing their knowledge and labor. The participative approach and the empowerment of grassroots beneficiaries, in addition to state authorities and Niger's research institutes and universities, is also a guarantee for the long-term sustainability of the intervention.

85. The adoption of new plans, no-regret interventions and policies at the State level, together with the increased attention of the Niger authorities to the agriculture/rural sector, are all elements in favor of the sustainability of the proposed initiative.

86. The strong institutional anchoring of the project is a reason to believe that the institutional risk that could endanger the project's sustainability will not be raised. Capacity building in risk assessment, risk reduction, vulnerabilities assessment, and adaptation technologies, including development policy frameworks, staff training, and institutional building and strengthening, will underpin the sustainability of the project outcomes.

87. Institutional capacity enhancement and technical support will facilitate the scaling up of the project by enabling relevant ministries to comprehensively and iteratively assess development needs and climate vulnerabilities, and ultimately to integrate climate change adaptation into national and subnational development and sectorial planning.

88. The emphasis on capacity building will also help sustain projects. Capacity building in risk assessment, risk reduction, vulnerability assessment, and adaptation technologies (including strategic development frameworks, staff training, and institution building) will support sustainability project results. The investments made and the new technologies introduced will be coupled with the reinforcement of the necessary management capacities. For example, when small water collection infrastructure is built under Component 2, functional management committees (including women) will be put in place to ensure proper use and maintenance. The training that the Trainers' Approach has followed also contributes to sustainability by ensuring that capabilities remain and can continue to be strengthened as needed well after the end of the project.

89. Finally, the third component of the project aims to develop an evidence-based knowledge system to inform adaptation policies and investments. This in turn will consolidate project results beyond implementation time.

V. PROJECT MANAGEMENT

V.1 Cost efficiency and effectiveness

90. This proposed project is cost-effective as it is expected to produce satisfactory results at a reasonable cost. It will be based on already existing structures and initiatives in Niger. During the preparation phase, the following cost-effective measures were identified for the project:

a. implementing a participatory, integrated approach to climate change adaptation at the community level;
b. conducting a range of training workshops, seminars, and awareness-raising activities for stakeholders;
c. building on already existing capacity building initiatives.

91. These measures were identified as no-regret[53], tangible and cost-effective as they: prioritize the needs of local communities in the project design; optimize the spending of project funds on meeting the needs of the local communities; and ensure that the project is well understood by beneficiaries to promote project success, ownership, and efficient use of finances.

92. For instance, while the PROMOVARE builds capacities of women in facility management and producer cooperatives for soil improvement techniques and rural infrastructure improvements, all the lessons learned will benefit and feed into the proposed project to ensure the best practices are adopted. It will also be integrated into existing planning processes and budgeting to maximize efficiency. This project is also made to complement the NAP GCF project in order to maximize its utility.

93. In addition, the proposed project includes technical training for local communities on implementing, maintaining and monitoring project interventions. A “training the trainers” approach will be adopted whereby extension agents will undergo technical capacity building. This is a cost-effective approach as it reduces the number of beneficiaries that will undergo direct training but will also enable the project to reach a wider audience as the trainers themselves will further disseminate climate change concepts amongst local communities. The training of local communities in conjunction with the adoption of a participatory “learning by doing” approach will further promote sustainability and the scaling-up of the interventions beyond the lifespan of the project.

94. According to the first estimations, the water infrastructures will have a payout over 3-5 years before becoming positive investments for the population. After the first mission in the targeted communes, a first table was drawn to establish the estimated costs according to the quantity and the type of water infrastructures[54]. Water infrastructures investments will include the construction of a miniature dam, the construction of an irrigation system with total water control for an area of 100 ha downstream of the mini-dam, the development and the equipment of 105 ha of irrigated areas through the rehabilitation/drilling of 10 water points, and the supply of 100 drip irrigation kits, 20 water pumps, and 1,000 linear meters of metal fencing.

Alternative interventions:

Implementation in other project sites

95. The targeted population is already aware of the issues linked to the water resources management. On-going projects such as PROMOVARE initiatives, the Community Action Plan for Climate Resilience (PAC-RC) and the PDIPC paved the way for the proposed project. Consequently, in terms of building infrastructures, the targeted populations and local authorities understand the importance of building resilient

[53] No-regret options are those that are justified by current climate conditions and further justified when climate change is considered, e.g. additional off-farm sources of income will provide livelihood benefits extreme weather events increase in frequency. Lim. B, and E. Spanger-Siegfried. 2004. Adaptation policy frameworks for climate change: developing strategies, policies and measures. Cambridge University Press, Cambridge, UK pp 253.
[54] See annex F for Estimation of water infrastructures implementation costs

infrastructure and are aware of the adaptation benefits. In areas that have not yet been subject to previous interventions, the cost-effectiveness would have been lower as the project would have devoted a greater part of its budget envelope to raising awareness and communicating with the populations concerned.

Training of professional maintenance staff for water infrastructures

96. The project would have been less cost-effective without maintenance training benefiting local communities accompanying the building water infrastructures. Indeed, by training youth in training center to be able to ensure the maintenance of the hybrid water systems, communities become self-sufficient to perpetuate their own benefits. Without this notion of self-training but also this will of « learning by doing », the project would have dedicated a bigger part of its budget to professional maintenance staff (internal or external to the country), thus reducing the cost-effectiveness of the project.

Introduction of 2 or 3 large multipurpose infrastructures

97. The output 2.2 could have focused on the implementation of 2 or 3 large-scale infrastructures for water management instead of developing multiple smaller infrastructures in different villages. This would have made the replication of the intervention as well as the maintenance and sustainability less likely. Implementing a larger number of small infrastructures helps reaching a larger span of beneficiaries and increases the range of lessons learned collected.

V.2 Project Management

Risk management

Additional Social and Environmental risks identified as part of the SESP process are available in Annex D. They will be subject to an ESIA and ESMP during the first year of project implementation.

Project risks				
Description	**Type**	**Impact, Probability and risk assessment**	**Mitigation Measures**	**Owner**
Extreme climate events such as floods and droughts could disrupt project activities and/or damage ecosystems and infrastructure.	Environmental	P=3 I=3 *Medium*	Coordination will be undertaken with partners for disaster response to ensure the protection of the implemented hybrid systems and irrigated water infrastructures. An appropriate emergency plan will be drawn to take quick action. Where damage occurs before ecosystem management adaptation approaches can reduce the impacts of extreme events, supplementary infrastructural approaches and planting will be undertaken.	*Project coordinator*

The preparation, construction and operation of some hydrological infrastructures could have temporary detrimental effects on physical, biological or human environments.	Environmental and social	P=3 I=2 *Low*	Environmental and social studies conducted prior to any infrastructure work susceptible to have a negative impact will analyse the risks and the best mitigation measures.	*Project coordinator*
Limited capacity within relevant ministries for supporting the NAP process	Organizational Environmental and Social	P=1 I=3 *Low*	A major part of the project aims to strengthen institutional and technical capacity for planning, designing and implementing local level adaptation actions. Technical capacity building expertise will be contracted to work with and train local technical staff.	*Project coordinator and national authorities Project coordinator and local/regional authorities*
Irrigation work could generate real or perceived usage conflicts between communities as well as put pressure on ecosystems	Organizational Environmental and Social	P=1 I=3 *Low*	Environmental and Social studies will ensure that the design of any irrigation work does not infringe on other communities' usage of the water resource. In the same spirit, environmental studies will ensure that reserved ecological debits are respected in cases where the water withdrawal is non-marginal. All such infrastructures will include a broad group of stakeholders in their design and preparation as to minimize risks of conflict. All stakeholders will have access to the governance body responsible for the infrastructure as well as formal means to voice their concerns.	*Project coordinator and national authorities Project coordinator and local/regional authorities*
Weak coordination with on-going adaptation process	Organizational	P=2 I=2 *Medium*	An operational coordination and consultation mechanisms will be established to ensure ownership of the process and engagement by all actors. In addition, SE/CNEDD is a central actor in climate-related initiatives, and its role as implementing partner will-facilitate the coordination between on-going initiatives.	*Project coordinator and implementing partner*
Low capacity of local communities to maintain and sustain water infrastructures	Organizational	P=2 I=3 *Low*	Relevant trainings and sensitization activities will be conducted under outcome 2 to support local communities to maintain and sustain the water infrastructures and understand the need for their involvement in the sustainability of the infrastrucures.	*National and local authorities*

Table 3: Project risks

98. As per standard UNDP requirements, the Project coordinator will monitor risks quarterly and report on the status of risks to the UNDP Country Office. The UNDP Country Office will record progress in the UNDP ATLAS risk log. Risks will be reported as critical when the impact and probability are high (i.e. when impact is rated as 5, and when impact is rated as 4 and probability is rated at 3 or higher). Management responses to critical risks will also be reported to the GEF in the annual PIR.

Social and environmental safeguards

99. The UNDP environmental and social safeguards requirements have been followed in the development of this project. In accordance with the UNDP Social and Environmental Screening Procedure, this project is rated as having a moderate environmental and social risk. More information through the completed Social and Environmental Screening Template is provided in the Annex D.

100. With regards to the overall project, the only activities that are deemed to represent some level of risk are those under Outputs 2.1 and 2.2, the other Outputs having little to no potential negative environmental or social effects. Overwhelmingly, activities covered in Outputs 2.1 and 2.2 are aimed at reducing human capital vulnerabilities to climate change through increased resiliency and productivity of the underlying natural capital. Given this logic, there are no tradeoffs between environmental and socioeconomic objectives. The potential negative environmental and social effects of the project are thus mainly those of unintended consequences, largely preventable with the implementation of appropriate studies, sound mitigation measures, surveillance of work as well as monitoring mechanisms. The extent of potential impacts, even without any kind of mitigation action, are generally limited in time and space as well as reversible.

101. Furthermore, output-specific social and environmental assessments conducted in the first phases of the project will identify: (1) the best technical measures to be put forward in each targeted community, prohibiting certain measures if environmental and social impacts associated with them in a specific environment are likely to be significant; (2) the best sites within a given location for each measure as to reduce negative impacts to a minimum; and (3) environmental and social management measures to be included in the Terms of Reference of contractors.

102. During the project preparation phase, the likely environmental and social risks posed by the project were evaluated and information from authorities and stakeholders were collected.

103. Finally, field surveys conducted in November 2017 sought to document any socio-environmental characteristics of targeted sites that might be of relevance for environmental and social management going forward. This precise and specific information will inform the next steps and contribute to making sure project activities are tailored to local environmental and social contexts.

104. Environmental and social grievances will be reported to the GEF in the annual PIR.

V.3 Agreement on intellectual property rights and use of logo on the project's deliverables and disclosure of information:

105. To accord proper acknowledgement to the GEF for providing grant funding, the GEF logo will appear together with the UNDP logo on all promotional materials, other written materials like publications developed by the project, and project hardware. Any citation on publications regarding projects funded by the GEF will also accord proper acknowledgement to the GEF. Information will be disclosed in accordance with relevant policies notably the UNDP Disclosure Policy[55] and the GEF policy on public involvement[56].

[55] See http://www.undp.org/content/undp/en/home/operations/transparency/information_disclosurepolicy/

[56] See https://www.thegef.org/gef/policies_guidelines

VI. PROJECT RESULTS FRAMEWORK

		This project will contribute to the following Sustainable Development Goal (s): SDG 2 – End hunger, achieve food security and improved nutrition and promote sustainable agriculture; SDG 5 – Achieve gender equality and empower all women and girls; SDG 6 – Clean water and sanitation; SDG 8 – Promote inclusive and sustainable economic growth, employment, and decent work for all; SDG 9 – Build resilient infrastructure; and SDG 13 – Take urgent action to combat climate change and its impacts.					
		This project will contribute to the following UNDAF/Country Programme Outcome 2: By 2018, national, regional, and local institutions are using appropriate systems and mechanisms for disaster risk prevention/risk management/disaster management, sustainable environmental management and food security.					
		This project will contribute to the following UNDP Strategic Plan 2018-2021 Signature solution 3: Enhance national prevention and recovery capacities for resilient societies					
	Objective and Outcome Indicators	**Unit of measurement**	**Baseline**	**Mid-term Target**	**End of Project Target**	**Source of verification**	**Assumptions**

Project Objective: **Strengthen the capacity of national and local institutions and communities to plan and budget for climate change adaptation, while seizing opportunities in the water sector to improve local adaptation and resilience in Niger.**	Indicator 1: Local, national and sector wide policies, plans and processes developed and strengthened to identify, prioritize and integrate adaptation strategies and measures related to the water sector	*4*	25 documents (plans, policies and processes) in the water sector were reviewed to identify entry points for the integration of CCA as a result of the project activities	25 documents (plans, policies and processes) revised by local and national institutions as a result of the project activities	Activity reports Revised documents	National and local institutions are willing to participate in the project activities and to integrate CCA into plans, policies, processes and budgets.
	Indicator 2: Number of direct beneficiaries with decreased vulnerability to climate change and level of decrease	The indicator will be updated according to the baseline during the first year of implementation.	10,000 beneficiaries (at least 50% women) see their average vulnerability reduced by 10% (characterized by rate of access to water, resilience to water scarcity and floods and agricultural yields).	42,450 beneficiaries (at least 50% women) see their average vulnerability reduced by 30% (characterized by rate of access to water, resilience to water scarcity and floods).	Survey in local communities in each target commune	The effects of the projects are significant and occur quickly enough to be reflected in a decrease in vulnerability. In addition, other factors are less important and will not impede attribution. All targeted villages participate actively and implementation goes well.

Component 1: Improving the planning of adaptation in the water sector	Indicator 3: Number of municipalities integrating CCA in relation with water sector into their public policies	8 municipalities targeted by the project PANA resilience integrate CCA into their public policies	The additional 7 municipalities have taken steps to integrate climate change adaptation in these documents.	An additional 7 municipalities have successfully integrated climate change adaptation in these documents.	Consultation with municipalities	UNDP takes practical steps to ensure the inclusion of the CNEDD's guidelines on IDCC in their public policies before validation.
	Indicator 4: Percentage of increase of budget for CCA)	0	20% increase in budget for CCA	25% increase in budget for CCA	post workshop evaluation questionnaire twice a year Survey within NGOs and extension services Activity reports	Politicians and institutions are willing to integrate coordination and consultation to improve their decisions-making processes.
Component 2: Developping field-tested knowledge for IWRM	Indicator 5: Number of people with more secured access to water	0	At least 10,000 people from targeted municipalities with improved access to water services as a result of the project	At least 42,450 of people from targeted municipalities with improved access to water services as a result of the project	Field visits	All targeted villages participate actively and implementation of those infrastructures goes well.
	Indicator 6: Hectare benefitting from better water management	0	500 ha will benefit from better water management	1,765 ha will benefit from better water management.	Field visits Activity reports	All targeted villages participate actively in the surveys and implementation of those infrastructures goes well.

Component 3: Fostering evidence-based decision-making processes	Indicator 7: Availability of a database on climate change adaptation in the water sector for technical partners	0	N/A	A database on CCA related to water sector is available and regularly updated	Number of connection Number of activities listed on the database Number of information loading on the data base	There is a good coordination and cooperation among the stakeholders of the project.

Table 4: Project Results Framework

VII. MONITORING AND EVALUATION (M&E) PLAN

106. The project results (as outlined in the project results framework) will be monitored annually and evaluated periodically during project implementation to ensure the project effectively achieves these results.

107. Project-level monitoring and evaluation will be undertaken in compliance with UNDP requirements as outlined in the UNDP POPP and UNDP Evaluation Policy. While these UNDP requirements are not outlined in this project document, the UNDP Country Office will work with the relevant project stakeholders to ensure UNDP M&E requirements are met in a timely fashion and at high quality standards. Additional mandatory GEF-specific M&E requirements (as outlined below) will be undertaken in accordance with the GEF M&E policy and other relevant GEF policies.

108. In addition to these mandatory UNDP and GEF M&E requirements, other M&E activities deemed necessary to support project-level adaptive management will be agreed upon during the Project Inception Workshop and will be detailed in the Inception Report. This will include the exact role of project target groups and other stakeholders in project M&E activities including the GEF Operational Focal Point and national/regional institutes assigned to undertake project monitoring. The GEF Operational Focal Point will strive to ensure consistency in the approach taken to the GEF-specific M&E requirements (notably the GEF Core Indicators) across all GEF-financed projects in the country.

VII.1 M&E Oversight and monitoring responsibilities

109. Project coordinator: The Project coordinator is responsible for the day-to-day project management and regular monitoring of project results and risks, including social and environmental risks. The Project coordinator will ensure that all project staff maintain a high level of transparency, responsibility, and accountability in M&E and the reporting of project results. The Project coordinator will inform the Project Board, the UNDP Country Office and the UNDP-GEF RTA of any delays or difficulties as they arise during implementation so that appropriate support and corrective measures can be adopted.

110. The Project coordinator will develop annual work plans based on the multi-year work plan included in Annex A, including annual output targets to support the efficient implementation of the project. The Project coordinator will ensure that the standard UNDP and GEF M&E requirements are fulfilled to the highest quality. This includes, but is not limited to, ensuring that the results framework indicators are monitored annually in time for evidence-based reporting in the GEF PIR, and that the monitoring of risks and the various plans/strategies developed to support project implementation (e.g. gender strategy, KM strategy, etc.) occur on a regular basis.

111. Project Board: The Project Board will take corrective action as needed to ensure the project achieves the desired results. The Project Board will hold project reviews to assess the performance of the project and appraise the Annual Work Plan for the following year. In the project's final year, the Project Board will hold an end-of-project review to capture lessons learned and discuss opportunities for scaling up and to highlight project results and lessons learned with relevant audiences. This final review meeting will also discuss the findings outlined in the project terminal evaluation report and the management response.

112. Project Implementing Partner: The Implementing Partner is responsible for providing any and all required information and data necessary for timely, comprehensive, and evidence-based project reporting, including results and financial data, as necessary and appropriate. The Implementing Partner will strive to ensure project-level M&E is undertaken by national institutes, and is aligned with national systems so that the data used by and generated by the project supports national systems.

113. UNDP Country Office: The UNDP Country Office will support the Project coordinator as needed, including through annual supervision missions. The annual supervision missions will take place according to the schedule outlined in the annual work plan. Supervision mission reports will be circulated to the project team and Project Board within one month of the mission. The UNDP Country Office will initiate and organize key GEF M&E activities including the annual GEF PIR, the *independent mid-term review* and the independent terminal evaluation. The UNDP Country Office will also ensure that the standard UNDP and GEF M&E requirements are fulfilled to the highest quality.

114. The UNDP Country Office is responsible for complying with all UNDP project-level M&E requirements as outlined in the UNDP POPP. This includes ensuring the UNDP Quality Assurance Assessment during implementation is undertaken annually; that annual targets at the output level are developed, and monitored and reported using UNDP corporate systems; the regular updating of the ATLAS risk log; and the updating of the UNDP gender marker on an annual basis based on gender mainstreaming progress reported in the GEF PIR and the UNDP ROAR. Any quality concerns flagged during these M&E activities (e.g. annual GEF PIR quality assessment ratings) must be addressed by the UNDP Country Office and the Project coordinator.

115. The UNDP Country Office will retain all M&E records for this project for up to seven years after project financial closure in order to support ex-post evaluations undertaken by the UNDP Independent Evaluation Office (IEO) and/or the GEF Independent Evaluation Office (IEO).

116. Project Management Unit: located within the SE/CNEDD, it is the operational body in charge of planning, management, and coordination of the implementation of the project. It will be placed under the authority of the project coordinator, and it will include one finance and administration staff, one water management expert, and one monitoring evaluation expert. In addition, 4 United Nations volunteers will be recruited to support the national project management unit.

117. UNDP-GEF Unit: Additional M&E and implementation quality assurance and troubleshooting support will be provided by the UNDP-GEF Regional Technical Advisor and the UNDP-GEF Directorate as needed.

118. **Audit**: The project will be audited according to UNDP Financial Regulations and Rules and applicable audit policies on NIM implemented projects[57].

VII.2 Additional GEF monitoring and reporting requirements

119. Inception Workshop and Report: A project inception workshop will be held within 60 days of project CEO endorsement, with the aim to:

i. Familiarize key stakeholders with the detailed project strategy and discuss any changes that may have taken place in the overall context since the project idea was initially conceptualized that may influence its strategy and implementation.
ii. Discuss the roles and responsibilities of the project team, including reporting lines, stakeholder engagement strategies and conflict resolution mechanisms.
iii. Review the results framework and monitoring plan.
iv. Discuss reporting, monitoring and evaluation roles and responsibilities and finalize the M&E budget; identify national/regional institutes to be involved in project-level M&E; discuss the role of the GEF OFP and other stakeholders in project-level M&E.
v. Update and review responsibilities for monitoring project strategies, including the risk log; SESP report, Social and Environmental Management Framework and other safeguard requirements; project grievance mechanisms; gender strategy; knowledge management strategy, and other relevant management strategies.
vi. Review financial reporting procedures and budget monitoring and other mandatory requirements and agree on the arrangements for the annual audit.

[57] See guidance here: https://info.undp.org/global/popp/frm/pages/financial-management-and-execution-modalities.aspx

vii. Plan and schedule Project Board meetings and finalize the first-year annual work plan.
viii. Formally launch the Project.
ix. The Project coordinator will prepare the inception report no later than one month after the inception workshop. The inception report will be cleared by the UNDP Country Office and the UNDP-GEF Regional Technical Adviser, and will be approved by the Project Board.

120. GEF Project Implementation Report (PIR): The Project coordinator, the UNDP Country Office, and the UNDP-GEF Regional Technical Advisor will provide objective input to the annual GEF PIR covering the reporting period from July (previous year) to June (current year) for each year of project implementation. The Project coordinator will ensure that the indicators included in the project results framework are monitored annually in advance of the PIR submission deadline so that progress can be reported in the PIR. Any environmental and social risks and related management plans will be monitored regularly, and progress will be reported in the PIR.

121. The PIR submitted to the GEF will be shared with the Project Board. The UNDP Country Office will coordinate the input of the GEF Operational Focal Point and other stakeholders to the PIR as appropriate. The quality rating of the previous year's PIR will be used to inform the preparation of the subsequent PIR.

122. Lessons learned and knowledge generation: Results from the project will be disseminated within and beyond the project intervention area through existing information-sharing networks and forums. The project will identify and participate, as relevant and appropriate, in scientific, policy-based and/or any other networks, which may be of benefit to the project. The project will identify, analyze, and share lessons learned that might be beneficial to the design and implementation of similar projects and disseminate these lessons widely. There will be continuous information exchange between this project and other projects of similar focus in the same country, region, and globally.

123. LDCF Core Indicators: The LDCF Core indicators included as Annex will be used to monitor global environmental benefits and will be updated for reporting to the GEF prior to MTR and TE. Note that the project team is responsible for updating the indicator status. The updated monitoring data should be shared with MTR/TE consultants prior to required evaluation missions, so these can be used for subsequent groundtruthing. The methodologies to be used in data collection have been defined by the GEF and are available on the GEF website.

124. *Independent Mid-term Review (MTR):* The terms of reference, the review process and the final MTR report will follow the standard templates and guidance for GEF-financed projects available on the UNDP Evaluation Resource Center (ERC).

125. The evaluation will be 'independent, impartial and rigorous'. The evaluators that will be hired to undertake the assignment will be independent from organizations that were involved in designing, executing or advising on the project to be evaluated. Equally, the evaluators should not be in a position where there may be the possibility of future contracts regarding the project under review.

126. The GEF Operational Focal Point and other stakeholders will be actively involved and consulted during the evaluation process. Additional quality assurance support is available from the BPPS/GEF Directorate.

127. The final MTR report and MTR TOR will be publicly available in English and will be posted on the UNDP ERC. A management response to MTR recommendations will be posted in the ERC within six weeks of the MTR report's completion.

128. Terminal Evaluation (TE): An independent terminal evaluation (TE) will take place upon completion of all major project outputs and activities. The terms of reference, the evaluation process and the final TE report will follow the standard templates and guidance for GEF-financed projects available on the UNDP Evaluation Resource Center.

129. The evaluation will be 'independent, impartial and rigorous'. The evaluators that will be hired to undertake the assignment will be independent from organizations that were involved in designing, executing or advising on the project to be evaluated. Equally, the evaluators should not be in a position where there may be the possibility of future contracts regarding the project being evaluated.

130. The GEF Operational Focal Point and other stakeholders will be actively involved and consulted during the terminal evaluation process. Additional quality assurance support is available from the BPPS/GEF Directorate.

131. The final TE report and TE TOR will be publicly available in English and posted on the UNDP ERC. A management response to the TE recommendations will be posted to the ERC within six weeks of the TE report's completion.

132. Final Report: The project's terminal GEF PIR along with the terminal evaluation (TE) report and corresponding management response will serve as the final project report package. The final project report package shall be discussed with the Project Board during an end-of-project review meeting to discuss lesson learned and opportunities for scaling up.

133. Agreement on intellectual property rights and use of logo on the project's deliverables and disclosure of information**:** To accord proper acknowledgement to the GEF for providing grant funding, the GEF logo will appear together with the UNDP logo on all promotional materials, other written materials like publications developed by the project, and project hardware. Any citation on publications regarding projects funded by the GEF will also accord proper acknowledgement to the GEF. Information will be disclosed in accordance with relevant policies notably the UNDP Disclosure Policy[58] and the GEF policy on public involvement[59].

VII.3 Mandatory GEF M&E Requirements and M&E Budget[60]

Monitoring and Evaluation Plan and Budget:			
GEF M&E requirements	**Responsible Parties**	**Indicative costs (US$)**	**Time frame**
Inception Workshop	Implementing Partner PM/Coordinator	Total: 30,000	Within 60 days of CEO endorsement of this project.
Inception Report	PM/Coordinator	None	Within 90 days of CEO endorsement of this project.
Monitoring of indicators in project results framework	M&E Specialist	Per year: 5,000	Annually prior to GEF PIR. This will include GEF core indicators.
GEF Project Implementation Report (PIR)	RTA UNDP Country Office[61] PM/Coordinator	None62	Annually typically between June-August
Monitoring all risks (UNDP risk register)	UNDP Country Office	*10,000*	On-going.

[58] See http://www.undp.org/content/undp/en/home/operations/transparency/information_disclosurepolicy/

[59] See https://www.thegef.org/gef/policies_guidelines

[60] This table aims at providing more clarity on the overall M&E activities to be conducted during implementation, and the indicative costs are not additional to the total budget presented in section X of the project document (no double-costing).

[61] Or equivalent for regional or global project

Monitoring and Evaluation Plan and Budget:			
GEF M&E requirements	**Responsible Parties**	**Indicative costs (US$)**	**Time frame**
	Coordinator/M&E Specialist/UNVs		
Monitoring of stakeholder engagement plan	UNVs	*20,000*	On-going.
Monitoring of gender action plan	UNVs	*19,600*	On-going.
Supervision missions	UNDP Country Office	None[62]	Annually
Oversight missions	RTA and BPPS/GEF	None62	Troubleshooting as needed
Mid-term LDCF Core indicators	*PMU*	*USD 9,750*	*Before mid-term review mission takes place.*
Independent Mid-term Review (MTR) [56]	Independent evaluators	*USD 30,000*	*January 2023*
Terminal *LDCF* Core indicators	Project Coordinator / UNVs	*USD 10,000*	Before terminal evaluation mission takes place
Independent Terminal Evaluation (TE)	Independent evaluators	USD 40,000	*Add date included on cover page of Project Document*
TOTAL indicative COST		*USD 194,350*	

Table 5: GEF M&E Requirements

[62] The costs of UNDP CO and UNDP-GEF Unit's participation and time are charged to the GEF Agency Fee.

VIII. GOVERNANCE AND MANAGEMENT ARRANGEMENTS

134. Roles and responsibilities of the project's governance mechanism: The project will be implemented following UNDP's National Implementation Modality (NIM), according to the Standard Basic Assistance Agreement between UNDP and the Government of Niger, and the Country Programme.

135. The **Implementing Partner** for this project is the SE/CNEDD. The Implementing Partner is the entity to which the UNDP Administrator has entrusted the implementation of UNDP assistance specified in this signed project document along with the assumption of full responsibility and accountability for the effective use of UNDP resources and the delivery of outputs, as set forth in this document.

136. The Implementing Partner is responsible for executing this project. Specific tasks include:

- Project planning, coordination, management, monitoring, evaluation and reporting. This includes providing all required information and data necessary for timely, comprehensive and evidence-based project reporting, including results and financial data, as necessary. The Implementing Partner will strive to ensure project-level M&E is undertaken by national institutes and is aligned with national systems so that the data used and generated by the project supports national systems.
- Risk management as outlined in this Project Document;
- Procurement of goods and services, including human resources;
- Financial management, including overseeing financial expenditures against project budgets;
- Approving and signing the multiyear workplan;
- Approving and signing the combined delivery report at the end of the year; and,
- Signing the financial report or the funding authorization and certificate of expenditures.

137. UNDP: UNDP is accountable to the GEF for the implementation of this project. This includes oversight of project execution to ensure that the project is being carried out in accordance with agreed standards and provisions. UNDP is responsible for delivering GEF project cycle management services comprising project approval and start-up, project supervision and oversight, and project completion and evaluation. UNDP is also responsible for the Project Assurance role of the Project Board/Steering Committee.

138. Project organization structure:

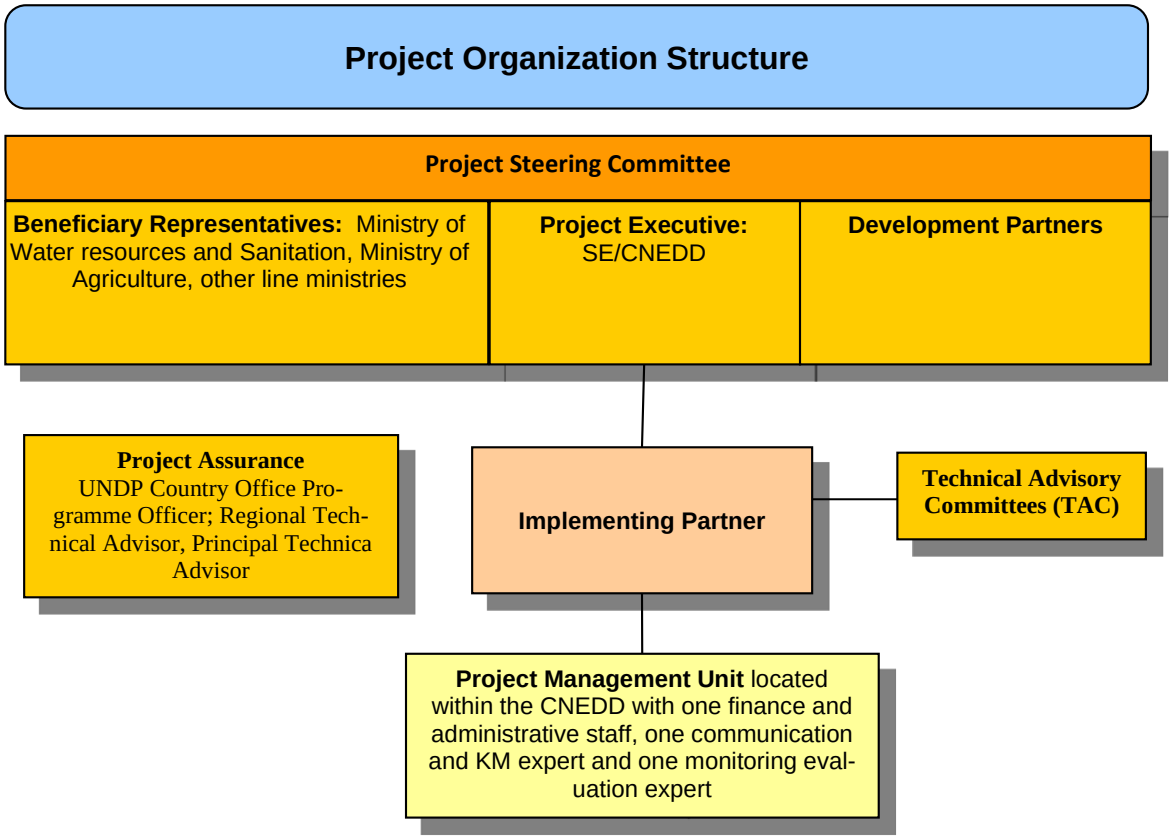


Figure 6: Project Organization Structure

Project Board:

139. The Project Board (also called Project Steering Committee) is responsible for making by consensus, management decisions when guidance is required by the Project coordinator, including recommendations for UNDP/Implementing Partner approval of project plans and revisions, and addressing any project level grievances. In order to ensure UNDP's ultimate accountability, Project Board decisions should be made in accordance with standards that shall ensure management for development results, best value money, fairness, integrity, transparency and effective international competition. In case consensus cannot be reached within the Board, the UNDP Resident Representative (or their designate) will mediate to find consensus and, if this cannot be found, will take the final decision to ensure project implementation is not unduly delayed.

140. Specific responsibilities of the Project Board include:

- Provide overall guidance and direction to the project, ensuring it remains within any specified constraints;
- Address project issues as raised by the project manager;
- Provide guidance on new project risks, and agree on possible mitigation and management actions to address specific risks;
- Agree on project manager's tolerances as required, within the parameters set by UNDP-GEF, and provide direction and advice for exceptional situations when the project manager's tolerances are exceeded;
- Advise on major and minor amendments to the project within the parameters set by UNDP-GEF;
- Ensure coordination between various donor and government-funded projects and programmes;

- Ensure coordination with various government agencies and their participation in project activities;
- Track and monitor co-financing for this project;
- Review the project progress, assess performance, and appraise the Annual Work Plan for the following year;
- Appraise the annual project implementation report, including the quality assessment rating report;
- Ensure commitment of human resources to support project implementation, arbitrating any issues within the project;
- Review combined delivery reports prior to certification by the implementing partner;
- Provide direction and recommendations to ensure that the agreed deliverables are produced satisfactorily according to plans;
- Address project-level grievances;
- Approve the project Inception Report, Mid-term Review and Terminal Evaluation reports and corresponding management responses;
- Review the final project report package during an end-of-project review meeting to discuss lesson learned and opportunities for scaling up.

141. The composition of the Project Board must include the following roles:

142. Project executive: The Executive is the SE/CNEDD, it represents ownership of the project and will chair the Project Board. This role can be held by a representative from the Government Cooperating Agency or UNDP.

143. The Executive is ultimately responsible for the project, supported by the Senior Beneficiary and Senior Supplier. The Executive's role is to ensure that the project is focused throughout its life cycle on achieving its objectives and delivering outputs that will contribute to higher level outcomes. The executive has to ensure that the project gives value for money, ensuring cost-conscious approach to the project, balancing the demands of beneficiary and supplier.

- Specific Responsibilities: (as part of the above responsibilities for the Project Board)
- Ensure that there is a coherent project organisation structure and logical set of plans;
- Set tolerances in the AWP and other plans as required for the Project coordinator;
- Monitor and control the progress of the project at a strategic level;
- Ensure that risks are being tracked and mitigated as effectively as possible;
- Brief relevant stakeholders about project progress;
- Organise and chair Project Board meetings.

144. Beneficiary Representatives: Individuals or groups representing the interests of those who will ultimately benefit from the project. Their primary function within the board is to ensure the realization of project results from the perspective of project beneficiaries. Often civil society representative(s) can fulfil this role. The Beneficiary representatives are the Ministry of Water resources and Sanitation, Ministry of Agriculture, other line ministries.

145. Development Partner(s): Individuals or groups representing the interests of the parties concerned that provide funding and/or technical expertise to the project.

Project coordinator:

146. The Project coordinator has the authority to run the project on a day-to-day basis on behalf of the Project Board within the constraints laid down by the Board. The Project coordinator is responsible for day-to-day management and decision-making for the project. The Project coordinator's prime responsibility is to ensure that the project produces the results specified in the project document, to the required standard of quality and within the specified constraints of time and cost.

147. His role will also involve the provision of technical support for the achievement of the activities. In particular, he will guide the identification of the sites and best options for the activities under

outcome 2, on water resources. He will also support the coordination of planning activities under outcome 1 and avoid inconsistency between the different mechanisms, planning revisions or training. Finally, he will also participate and facilitate dialogues to be organized as part of the outcome 3.

148. The Implementing Partner appoints the Project coordinator, who should be different from the Implementing Partner's representative in the Project Board.

149. Specific responsibilities include:

- Provide direction and guidance to project team(s)/ responsible party (ies);
- Liaise with the Project Board to assure the overall direction and integrity of the project;
- Identify and obtain any support and advice required for the management, planning and control of the project;
- Responsible for project administration;
- Plan the activities of the project and monitor progress against the project results framework and the approved annual workplan;
- Mobilize personnel, goods and services, training and micro-capital grants to initiative activities, including drafting terms of reference and work specifications, and overseeing all contractors' work;
- Monitor events as determined in the project monitoring schedule plan/timetable, and update the plan as required;
- Manage requests for the provision of financial resources by UNDP, through advance of funds, direct payments or reimbursement using the fund authorization and certificate of expenditures;
- Monitor financial resources and accounting to ensure the accuracy and reliability of financial reports;
- Be responsible for preparing and submitting financial reports to UNDP on a quarterly basis;
- Manage and monitor the project risks initially identified and submit new risks to the project board for consideration and decision on possible actions if required; update the status of these risks by maintaining the project risks log;
- Capture lessons learned during project implementation;
- Prepare the annual workplan for the following year; and update the Atlas Project Management module if external access is made available.
- Prepare the GEF PIR and submit the final report to the Project Board;
- Based on the GEF PIR and the Project Board review, prepare the AWP for the following year.
- Ensure the mid-term review process is undertaken as per the UNDP guidance, and submit the final MTR report to the Project Board.
- Identify follow-on actions and submit them for consideration to the Project Board;
- Ensure the terminal evaluation process is undertaken as per the UNDP guidance, and submit the final TE report to the Project Board;

Project Assurance:

150. UNDP performs the quality assurance role and supports the Project Board and Project Management Unit by carrying out objective and independent project oversight and monitoring functions. This role ensures appropriate project management milestones are managed and completed. The Project Board cannot delegate any of its quality assurance responsibilities to the Project Manager. UNDP provides a three – tier oversight services involving the UNDP Country Offices and UNDP at regional and headquarters levels. Project assurance is totally independent of the Project Management function.

Governance role for project target groups

151. The project will focus on advancing the planning for adaptation in the water sector, including through the implementation of on-the ground water activities that will provide lessons learned for future planning and budgeting. This project will enable local communities to i) enhance their understanding and awareness of the impacts of climate change on water resources, as well as floods and droughts ii) have a sustainable access to water for drinking and farming; iii) be protected in the case of floods and droughts.

152. Communities will be fully involved in the management of water infrastructures through the creation of water users' committees, that will enable the sustainability of the infrastructures and their maintenance. They will be responsible for the collection of fees from water users, to cover the costs of maintenance and future investments. Communities will also be involved in the identification of priority interventions to inform decision makers and advance the NAP process for the water sector.

Technical Advisory Committees (TAC):

153. In addition, the establishment of four technical assurance committees (TACs) is envisaged to support the multi-stakeholder work both at the national (1) and the departmental level (3) of the project. The national TAC will include a wide range of government and non-governmental partners indicated in the project document. The departmental TACs shall be established in the departments of Zinder, Tahoua, and Tillabery, and include project partners and additional organisations of expertise relevant to the project.

154. It is noted that partners may be appointed on an ad hoc manner, depending on the nature of their work relationship with the project activities at a time. In particular, a responsible partner might be identified during the project implementation to conduct the feasibility studies for the activities under outcome 2. The most adequate modality will be discussed with national stakeholders during project implementation.

Project extensions:

155. The UNDP-GEF Executive Coordinator must approve all project extension requests. Note that all extensions incur costs and the GEF project budget cannot be increased. A single extension may be granted on an exceptional basis and only if the following conditions are met: one extension only for a project for a maximum of six months; the project management costs during the extension period must remain within the originally approved amount, and any increase in PMC costs will be covered by non-GEF resources; the UNDP Country Office oversight costs during the extension period must be covered by non-GEF resoruces.

IX. FINANCIAL PLANNING AND MANAGEMENT

156. The total cost of the project is US$ 40,792,282. This is financed through a LDCF grant of US$ 8,925,000, and US$ 31,867,282 in cash or kind co-financing. The UNDP, as the GEF Implementing Agency, is responsible for the execution of the GEF resources and the cash co-financing transferred to UNDP bank account only.

157. Parallel co-financing: The actual realization of project co-financing will be monitored during the mid-term review and terminal evaluation process and will be reported to the GEF. The planned parallel co-financing will be used as follows:

Co-financing source	Co-financing type	Co-financing amount
SE/CNEDD	In Kind	US$ 3,300,000
Ministry of Hydraulics and Sanitation	Cash Grant	US$ 25,400,000
UNDP	Cash	US$ 3,167,282

Table 6: Parallel co-financing

158. Budget Revision and Tolerance: As per UNDP requirements outlined in the UNDP POPP, the project board will agree on a budget tolerance level for each plan under the overall annual work plan allowing the project coordinator to expend up to the tolerance level beyond the approved project budget amount for the year without requiring a revision from the Project Board. Should the following deviations occur, the Project coordinator and UNDP Country Office will seek the approval of the BPPS/GEF team as these are considered major amendments by the GEF:

i. Budget re-allocations among components in the project budget with amounts involving 10% of the total project grant or more;

ii. Introduction of new budget items/or components that exceed 5% of original GEF allocation.

159. Any over-expenditure incurred beyond the available GEF grant amount will be absorbed by non-GEF resources (e.g. UNDP TRAC or cash co-financing).

160. Refund to Donor: Should a refund of unspent funds to the GEF be necessary, this will be managed directly by the UNDP-GEF Unit in New York.

161. Project Closure: Project closure will be conducted as per UNDP requirements outlined in the UNDP POPP. All costs incurred to close the project must be included in the project closure budget and reported as final project commitments presented to the Project Board during the final project review. The only costs a project may incur following the final project review are those included in the project closure budget.

162. Operational completion: The project will be operationally completed when the last UNDP-financed inputs have been provided and the related activities have been completed. This includes the final clearance of the Terminal Evaluation Report (that will be available in English) and the corresponding management response, and the end-of-project review Project Board meeting. The Implementing Partner, through a Project Board decision, will notify the UNDP Country Office when operational closure has been

completed. At this time, the relevant parties will have already agreed and confirmed in writing the arrangements for the disposal of any equipment that is still the property of UNDP.

163. Transfer or disposal of assets: In consultation with the NIM Implementing Partner and other parties of the project, UNDP programme manager (UNDP Resident Representative) is responsible for deciding on the transfer or other disposal of assets. Transfer or disposal of assets is recommended to be reviewed and endorsed by the project board following UNDP rules and regulations. Assets may be transferred to the government for project activities managed by a national institution at any time during the life of a project. In all cases of transfer, a transfer document must be prepared and kept on file[63].

164. Financial completion: The project will be financially closed when the following conditions have been met:

iii. The project is operationally completed or has been cancelled;

iv. The Implementing Partner has reported all financial transactions to UNDP;

v. UNDP has closed the accounts for the project;

vi. UNDP and the Implementing Partner have certified a final Combined Delivery Report (which serves as final budget revision).

165. The project will be financially completed within 6 months of operational closure or after the date of cancellation. Between operational and financial closure, the implementing partner will identify and settle all financial obligations and prepare a final expenditure report. The UNDP Country Office will send the final signed closure documents including confirmation of final cumulative expenditure and unspent balance to the BPPS/GEF Unit for confirmation before the project will be financially closed in Atlas by the UNDP Country Office.

166. UNDP Direct Project Services: The UNDP, as GEF Agency for this project, will provide project management cycle services for the project as defined by the GEF Council. In addition, the Government of Niger may request UNDP direct services for specific projects, according to its policies and convenience. If requested the services would follow the UNDP policies on the recovery of direct costs. As is determined by the GEF Council requirements, these service costs will be assigned as Project Management Cost, duly identified in the project budget as Direct Project Costs. Eligible Direct Project Costs should not be charged as a flat percentage. They should be calculated based on estimated actual or transaction based costs and should be charged to the direct project costs account codes: 64397 – 'Services to projects - CO staff' and 74596 – 'Services to projects - GOE for CO'.

(a) Identification and/or recruitment of project personnel;

(b) Provision of Responsible Party Agreements;

(c) Identification and facilitation of implementation of activities;

(d) Procurement of goods and services required under the project.

167. These services, and their cost, will be charged under UNDP TRAC resources.

168. Refund to GEF: Should a refund of unspent funds to the GEF be necessary, this will be managed directly by the BPPS/GEF Directorate in New York. No action is required by the UNDP Country Office on the actual refund from UNDP project to the GEF Trustee.

[63] See https://popp.undp.org/_layouts/15/WopiFrame.aspx?sourcedoc=/UNDP_POPP_DOCUMENT_LIBRARY/Public/PPM_Project%20Management_Closing.docx&action=default.

X. TOTAL BUDGET AND WORK PLAN

Total Budget and Work Plan			
Atlas Proposal or Award ID:	00113127	Atlas Primary Output Project ID:	00111438
Atlas Proposal or Award Title:	Planning and Financing Adaptation in Niger		
Atlas Business Unit	NER10		
Atlas Primary Output Project Title	Planning and Financing Adaptation in Niger		
UNDP-GEF PIMS No.	5336		
Implementing Partner	Executive Secretariat of the National Council on Environment for Sustainable Development (SE/CNEDD)		

GEF Component/ Atlas Activity	Responsible Party	Fund ID	Donor Name	Atlas Budgetary Account Code	ATLAS Budget Description	Amount Year 1 (USD)	Amount Year 2 (USD)	Amount Year 3 (USD)	Amount Year 4 (USD)	Amount Year 5 (USD)	Total (USD)	See Budget Note:
Outcome 1: Integrate climate change adaptation in relevant water-related budgeting and planning frameworks at national and local levels	**CNEDD**	**62160**	**GEF LDCF**	71200	International consultant	123,388	90,278	90,278	90,278	90,278	484,500	1
				71300	Local Consultants	79,300	38,300	16,900	1,300	9,800	145,600	2
				71800	Contractual Services - Individual	12,000	12,000	12,000	12,000	12,000	60,000	3
				72200	Equipment and Furniture	27,800	13,000	12,000	12,000	18,000	82,800	4
				75700	Training, Workshops and Conferences	65,000	116,000	116,000	116,000	87,000	500,000	5
				71600	Travel	35,000	16,000	17,000	13,000	17,000	98,000	6
				Total Outcome 1		**342,488**	**285,578**	**264,178**	**244,578**	**234,078**	**1,370,900**	
Outcome 2: Disseminate economically sustainable hybrid village water systems and	**CNEDD**	**62160**	**GEF LDCF**	71200	International consultant	106,408	46,298	46,298	46,298	46,298	291,600	7
				71300	Local Consultants	45,220	21,820	21,820	21,820	21,820	132,500	8
				72100	Contractual Services - Companies	1,000,000	2,149,600	1,490,000	350,000	0	4,989,600	9
				71800	Contractual Services - Individual	14,050	14,050	14,050	14,050	14,050	70,250	10

multipurpose infra-struc-tures				72200	Equipment and Furniture	2,103	11,000	12,000	2,000	4,000	31,103	11
				75700	Training, Workshops and Confer-ences	55,000	125,000	125,000	85,000	80,000	470,000	12
				71600	Travel	20,000	2,000	17,000	12,000	16,000	67,000	13
				Total Outcome 2		**1,242,781**	**2,369,768**	**1,726,168**	**531,168**	**182,168**	**6,052,053**	
Outcome 3: Estab-lish evidence-based knowledge to in-form policies and investments on ad-aptation in the wa-ter sector	**CNEDD**	**62160**	**GEF LDCF**	71200	International consultant	61,264	52,234	52,234	52,234	52,234	270,200	14
				71300	Local Consultants	24,097	22,500	28,700	22,500	5,100	102,897	15
				72100	Contractual Services - Companies	65,000	0	0	0	0	65,000	16
				71800	Contractual Services - Individuel	4,000	4,000	4,000	4,000	4,000	20,000	17
				72200	Equipment and Furniture	15,000	26,700	12,000	11,200	6,950	71,850	18
				75700	Training, Workshops and Confer-ences	49,400	71,800	89,400	70,600	62,400	343,600	19
				71600	Travel	18,000	17,500	15,000	18,000	14,000	82,500	20
				74500	Miscellaneous	4,250	4,250	4,250	4,250	4,250	21,250	21
				Total Outcome 3		**241,011**	**198,984**	**205,584**	**182,784**	**148,934**	**977,297**	
Outcome 4 : Moni-toring and Evalua-tion	**CNEDD**	**62160**	**GEF LDCF**	75700	Training, Workshops and Confer-ences	30,000	0	0	0	0	30,000	22
				71800	Contractual Services - Individuel	10,950	10,950	10,950	10,950	10,950	54,750	23
				71200	International consultant	0	0	21,000	0	28,000	49,000	24
				71300	Local Consultants	0	0	9,000	0	12,000	21,000	25
				Sub-total Outcome 4 LDCF		**40,950**	**10,950**	**40,950**	**10,950**	**50,950**	**154,750**	
				71500	UNV	7,920	7,920	7,920	7,920	7,920	39,600	26
				Sub-total Outcome 2 UNDP		**7,920**	**7,920**	**7,920**	**7,920**	**7,920**	**39,600**	
				Total Outcome 4		**48,870**	**18,870**	**48,870**	**18,870**	**58,870**	**194,350**	
Project Manage-ment Cost	**CNEDD**	**62160**	**GEF LDCF**	71400	Contractual Services - Individuel	41,000	41,000	41,000	41,000	41,000	205,000	27
				71600	Travel	10,000	10,000	10,000	10,000	10,000	50,000	28
				72200	Equipment and Furniture	20,000	5,000	0	0	0	25,000	29
				74100	Professional Services	3,000	3,000	3,000	3,000	3,000	15,000	30
				75700	Training, Workshops and Confer-ences	15,000	15,000	15,000	15,000	15,000	75,000	31
				Sub-total Project Management Cost GEF LDCF		**89,000**	**74,000**	**69,000**	**69,000**	**69,000**	**370,000**	
	UNDP	**4000**	**UNDP**	74596	Direct Project Cost	1,375	1,375	1,375	1,375	1,367	6,867	32
				71400	Contractual Services - Individuel	17,000	17,000	17,000	17,000	17,000	85,000	33

				72200	Equipment and Furniture	114,133	0	0	0	0	114,133	34
				71500	UNV	28,280	28,080	28,080	27,980	27,980	140,400	35
				73100	Rental & Maintenance-Premises	19,000	20,000	25,000	25,000	25,000	114,000	36
	Sub-total Project Management Cost UNDP					**179,788**	**66,455**	**71,455**	**71,355**	**71,347**	**460,400**	
				Total Project Management Cost		**268,788**	**140,455**	**140,455**	**140,355**	**140,347**	**830,400**	
				Total GEF LDCF		**1,956,230**	**2,939,280**	**2,305,880**	**1,038,480**	**685,130**	**8,925,000**	
				Total UNDP		**187,708**	**74,375**	**79,375**	**79,275**	**79,267**	**500,000**	
				Total Project Cost		**2,143,938**	**3,013,655**	**2,385,255**	**1,117,755**	**764,397**	**9,425,000**	

Table 7: General budget of the project

Budget Notes	
1	Pro-rata for the CTA (44% of $130,000): @ $700/day. 120 days in Y1, 50 days in Y2, Y3, Y4 and Y5. International Consultants for a total of 432140$$: - The setting up of the coordination team for the water sector. - The design of the NAP document for the water sector. - The establishment of partnerships with institutions and organizations. - The preparation of training modules. - The design of outreach products for communication. - The establishment of links and data exchange protocols. - The assessment of climate vulnerability - The promotion of dialogues through the annual publication of reports and the organization of dialogues - The conduct of studies to assess the costs and benefits of adaptive measures in the water sector. - The development of puri-annual programmatic and budgeting climate sensitive approaches. - The development of a detailed water regulatory framework

2	National Consultants for a total of $145,600: - The setting up of the coordination team for the water sector. - The gap and need analysis to create an enabling environment for IWRM. - The conduct of multi-stakeholder consultation workshops. - The design of the NAP document for the water sector. - The establishment of partnerships with institutions and organizations. - The preparation of training modules. - The design of outreach products for communication. - The development of harmonized/standardized indicators, data processing, modeling, projections, vulnerability assessments, GIS for CCA practices in the water sector. - The review of legal, policy and regulatory frameworks to identify gaps and inconsistencies in directing adaptation investment and collect related information - The establishment of links and data exchange protocols. - The assessment of climate vulnerability - The promotion of dialogues through the annual publication of reports and the organization of dialogues - The conduct of studies to assess the costs and benefits of adaptive measures in the water sector. - The identification of climate indicators and continuous monitoring mechanisms - The development of puri-annual programmatic and budgeting climate sensitive approaches. - The development of a detailed water regulatory framework to better integrate CCA in water resources management
3	Pro-rata for the Salary of the Project coordinator (30%). Under outcome 1, the PM will techinally support planning activities under outcome 1 and avoid inconsistency between the different mechanisms, planning reviews or training. His cost under this outcome will include the provision of technical inputs to the NCs' and ICs' reports and the participation to restitution workshops, in particular by ensuring that the results from the different reports are complementary and avoid duplication or contradictions. Exceptionally, the project coordinator will participate to the training sessions. @ $ 25,000/year. Pro-rata for the salary of the Communication and KM Specialist (30%), whose role will be to improve the KM on the results of the project in order to (i) strengthen the ownership, (ii) increase the understanding of climate change and the project for project beneficiaries and other stakeholders and (iii) enable the up scaling. @ $15,000/year
4	Procurement of furniture required to elaborate and distribute developed templates and guidelines and procurement of furniture and communication material for public awareness raising campaigns: reprography of short reports, long reports, binding sets, costs of sending by post
5	Costs of hosting (venue, catering, equipment hire, specialist trainers, informational materials, DSA, etc.) basic training, advanced training, annual refresher training and train-the-trainer courses for data collectors and administrative agents: rental kit digital equipment, snack buffet and renting a conference room
6	Travel in connection with activities in Component 1, but not lumped into consultants' offers.
7	Pro-rata for the CTA (44%): @ $700/day. 120 days in Y1, 50 days in Y2, Y3, Y4 and Y5. International Consultants for a total of $212,240: - The establishment of an effective water users' committees in each village, and training for the maintenance of infrastructures.

	- The training of instructors of the associations' village councils to form young people and women to maintain the hybrid water systems. - The design information and awareness programmes to facilitate communication, education and public access to data on water resources management and good CCA practices. - A safeguards specialist for the formulation of the ESIA and ESMP (6 weeks at $4,500 per week Year 1; Total: $27,000)
8	National Consultants for a total of $109100: - The establishment of an effective water users' committees in each village, and training for the maintenance of infrastructures. - The design information and awareness programmes to facilitate communication, education and public access to data on water resources management and good CCA practices. - The organization of advocacy workshops and undertake knowledge sharing activities to educate the population on disasters risk management. - Social Inclusion Specialist leading ESIA and ESMP processes (10 weeks at $1,500 per week Y1; Total: $15,000); - Local Social Inclusion Specialist, supporting ESIA and ESMP processes (6 weeks at $1,400 per week Y1; Total: $8,400)
9	Contractual services for the: - Feasibility study for the hybrid systems; - Installation of hybrid systems (with gravity tanks and two distinct pipes) in 5 villages. - Drilling and water distribution in 50 villages. - Restoration of 10km of eroded banks. - Restoration of 1,000ha of glacis - Restoration of 300ha of wooded areas and 380ha of grazing areas - 2 spreading thresholds; - Trainings of national stakeholders on the conduct of groundwater feasibility studies
10	Pro-rata for the Salary of the Project coordinator (40%). Under outcome 2, he will guide the identification of the sites and best options for the activities on water resources. The project coordinator will have expertise in water management and climate change (see ToRs), and will be able to review the offers and supervise the works. During the construction of infrastructures, he will ensure adequate consultations were conducted with local communities and that the infrastructures are the most cost-effective options for climate change adaptation @ $ 25,000/year Pro-rata for the salary of the Communication and KM Specialist (27%) whose role will be to improve the KM on the results of the project in order to (i) strengthen the ownership, (ii) increase the understanding of climate change and the project for project beneficiaries and other stakeholders and (iii) enable the up scaling. @ $15,000/year
11	Procurement of furniture required to elaborate and distribute developed templates and guidelines and procurement of furniture and communication material for public awareness raising campaigns: reprography of short reports, long reports, binding sets, costs of sending by post
12	Costs of hosting (venue, catering, equipment hire, specialist trainers, informational materials, DSA, etc.) basic training, advanced training, annual refresher training and train-the-trainer courses for data collectors and administrative agents: rental kit digital equipment, snack buffet and renting a conference room
13	Travel in connection with activities in Component 2, but not lumped into consultants' offers.
14	Pro-rata for the CTA (12%): @ $700/day. 120 days in Y1, 50 days in Y2, Y3, Y4 and Y5. International Consultants for a total of $$255,920:

	- The design of policy briefs. - The conduct consultations workshops to discuss and deliberate about the future general plan of Niger in terms of climate negotiations and develop the Niger Position Paper on climate negotiations. - The development of monitoring plans to measure CCA causality and impacts on the water sector. - The definition of adaptation priorities in the water sector based on the identified climate change impacts and set up an impact evaluation framework to assess the efficiency of the interventions. - The conduct of performance and impact assessments and the set up of a training program. - The facilitatation of consideration of success factors of local experience in PDCs and PLEAs. - The development of a scaling-up strategy for successful initiatives.
15	National Consultants for a total of $102,897: - The organization of regular dialogues for a better coordination and interaction with the several stakeholders. - The conduct consultations workshops to discuss and deliberate about the future general plan of Niger in terms of climate negotiations and develop the Niger Position Paper on climate negotiations. - The development of monitoring plans to measure CCA causality and impacts on the water sector. - The definition of adaptation priorities in the water sector based on the identified climate change impacts and set up an impact evaluation framework to assess the efficiency of the interventions. - The conduct of performance and impact assessments and the set up of a training program. - The facilitatation of consideration of success factors of local experience in PDCs and PLEAs. - The development of a scaling-up strategy for successful initiatives. - The strengthening of partnerships and research networks on adaptation between different institutions such as research centers and universities.
16	Contractual services for the setting up of an on-line community platform.
17	Pro-rata for the Salary of the Project coordinator (10%). Under outcome 3, he will participate to and facilitate organized dialogues for the establishment of evidence-based knowledge to inform policies and investments on adaptation in the water sector. His knowledge of the project progress and results, as well as his experise in water management and climate change will give him the tools to lead or orient these discussions. @ $ 25,000/year Pro-rata for the salary of the Communication and KM Specialist (10%) whose role will be to improve the KM on the results of the project in order to (i) strengthen the ownership, (ii) increase the understanding of climate change and the project for project beneficiaries and other stakeholders and (iii) enable the up scaling. @ $15,000/year
18	Procurement of furniture required to elaborate and distribute developed templates and guidelines and procurement of furniture and communication material for public awareness raising campaigns: reprography of short reports, long reports, binding sets, costs of sending by post
19	Costs of hosting (venue, catering, equipment hire, specialist trainers, informational materials, DSA, etc.) basic training, advanced training, annual refresher training and train-the-trainer courses for data collectors and administrative agents: rental kit digital equipment, snack buffet and renting a conference room
20	Travel in connection with activities in Component 3, but not lumped into consultants' offers.

21	Utilities, internet, bank and insurance, security, adverts, etc.
22	Inception workshop
23	Pro-rata for the salary of the Monitoring and Evaluation Specialist (73%). @ $ 15,000/year
24	Mid-term review IC. @ US$ 21,000 Terminal Evaluation IC. @ US$ 28,000
25	Mid-term review NC. @ US$ 9,000 Terminal Evaluation NC. @ US$ 12,000
26	Pro-rata of the salaries of 3 UNVs to support the monitoring of risks, stakeholder engagement plan and the gender action plan (22%). @US$ 36,000/year
27	Pro-rata for the Salary of the Project coordinator (20%). @ $ 25,000/year Pro-rata for the salary of the Communication and KM Specialist (33%). @ $15,000/year Salary of the National Finance and Administrative Specialist. @ $15,000/year Pro-rata for the salary of the Monitoring and Evaluation Specialist (27%). @ $ 15,000/year Salary of the Secretary. @ $ 12,000/year
28	Travels from the project team for site visits and trainings as necessary.
29	Procurement of office equipment (computers, cellphones, desks, chairs, etc.)
30	Audit fees @ $ 3,000/year
31	Costs for the committees, project board meetings, and Project Management Unit specific training needs
32	Direct Project Cost for the project: recruitment of ICs, procurement of equipment, etc.
33	Salary for 2 drivers and one guard.
34	Procurement of 2 vehicles and 3 motorbikes
35	Pro-rata of the salaries of 3 national UNVs that will be based in each of the regions targeted by the project to ensure the follow-up of the activities on the ground. They will act as local focal points. @US$ 36,000/year
36	Maintenance of vehicles

Table 8: Budget Notes

	Amount Year 1	Amount Year 2	Amount Year 3	Amount Year 4	Amount Year 5	Total
GEF	1,956,230	2,939,280	2,305,880	1,038,480	685,130	**8,925,000.00**
GCF	1,338,141	1,329,141	0	0	0	**2,667,282.00**
CNEDD (GoN)	1,100,000.00	1,100,000.00	1,100,000.00	0	0	**3,300,000.00**
Ministère de l'Hydraulique et de l'Assainissement (GoN) - PIDACC	4,860,000	4,860,000	4,860,000	4,860,000	4,860,000	**24,300,000.00**
Ministère de l'Hydraulique et de l'Assainissement (GoN) – Mékrou 2	350,000	350,000	400,000	0	0	**1,100,000.00**
UNDP	187,708	74,375	79,375	79,275	79,267	**500,000.00**
Total	**9,792,079**	**10,652,796**	**8,745,255**	**5,977,755**	**5,624,397**	**40,792,282.00**

Table 9: Summary of Funds

XI. LEGAL CONTEXT

169. This project document shall be the instrument referred to as such in Article 1 of the Standard Basic Assistance Agreement between the Government of Niger and UNDP, signed on (date). All references in the SBAA to “Executing Agency” shall be deemed to refer to “Implementing Partner.”

170. This project will be implemented by the SE/CNEDD in accordance with its financial regulations, rules, practices and procedures only to the extent that they do not contravene the principles of the Financial Regulations and Rules of UNDP. Where the financial governance of an Implementing Partner does not provide the required guidance to ensure best value for money, fairness, integrity, transparency, and effective international competition, the financial governance of UNDP shall apply.

171. Any designations on maps or other references employed in this project document do not imply the expression of any opinion whatsoever on the part of UNDP concerning the legal status of any country, territory, city or area or its authorities, or concerning the delimitation of its frontiers or boundaries.

XII. Risk management

172. Consistent with the Article III of the SBAA [or the Supplemental Provisions to the Project Document], the responsibility for the safety and security of the Implementing Partner and its personnel and property, and of UNDP's property in the Implementing Partner's custody, rests with the Implementing Partner. To this end, the Implementing Partner shall:

    a) put in place an appropriate security plan and maintain the security plan, taking into account the security situation in the country where the project is being carried;

173. assume all risks and liabilities related to the Implementing Partner's security, and the full implementation of the security plan.

174. UNDP reserves the right to verify whether such a plan is in place, and to suggest modifications to the plan when necessary. Failure to maintain and implement an appropriate security plan as required hereunder shall be deemed a breach of the Implementing Partner's obligations under this Project Document.

175. The Implementing Partner agrees to undertake all reasonable efforts to ensure that no UNDP funds received pursuant to the Project Document are used to provide support to individuals or entities associated with terrorism and that the recipients of any amounts provided by UNDP hereunder do not appear on the list maintained by the Security Council Committee established pursuant to resolution 1267 (1999). The list can be accessed via http://www.un.org/sc/committees/1267/aq_sanctions_list.shtml.

176. The Implementing Partner acknowledges and agrees that UNDP will not tolerate sexual harassment and sexual exploitation and abuse of anyone by the Implementing Partner, and each of its responsible parties, their respective sub-recipients and other entities involved in Project implementation, either as contractors or subcontractors and their personnel, and any individuals performing services for them under the Project Document.

177. (a) In the implementation of the activities under this Project Document, the Implementing Partner, and each of its sub-parties referred to above, shall comply with the standards of conduct set forth in the Secretary General's Bulletin ST/SGB/2003/13 of 9 October 2003, concerning "Special measures for protection from sexual exploitation and sexual abuse" ("SEA").

178. (b) Moreover, and without limitation to the application of other regulations, rules, policies and procedures bearing upon the performance of the activities under this Project Document, in the implementation of activities, the Implementing Partner, and each of its sub-parties referred to above, shall not engage in any form of sexual harassment ("SH"). SH is defined as any unwelcome conduct of a sexual nature that might reasonably be expected or be perceived to cause offense or humiliation, when such conduct interferes with work, is made a condition of employment or creates an intimidating, hostile or offensive work environment.

179. a) In the performance of the activities under this Project Document, the Implementing Partner shall (with respect to its own activities), and shall require from its sub-parties referred to in paragraph 4 (with respect to their activities) that they, have minimum standards and procedures in place, or a plan to develop and/or improve such standards and procedures in order to be able to take effective preventive and investigative action. These should include: policies on sexual harassment and sexual exploitation and abuse; policies on whistleblowing/protection against retaliation; and complaints, disciplinary and investigative mechanisms. In line with this, the Implementing Partner will and will require that such sub-parties will take all appropriate measures to:

i. Prevent its employees, agents or any other persons engaged to perform any services under this Project Document, from engaging in SH or SEA;

ii. Offer employees and associated personnel training on prevention and response to SH and SEA, where the Implementing Partner and its sub-parties referred to in paragraph 4 have not put in place its own training regarding the prevention of SH and SEA, the Implementing Partner and its sub-parties may use the training material available at UNDP;

iii. Report and monitor allegations of SH and SEA of which the Implementing Partner and its sub-parties referred to in paragraph 4 have been informed or have otherwise become aware, and status thereof;

iv. Refer victims/survivors of SH and SEA to safe and confidential victim assistance; and

v. Promptly and confidentially record and investigate any allegations credible enough to warrant an investigation of SH or SEA. The Implementing Partner shall advise UNDP of any such allegations received and investigations being conducted by itself or any of its sub-parties referred to in paragraph 4 with respect to their activities under the Project Document, and shall keep UNDP informed during the investigation by it or any of such sub-parties, to the extent that such notification (i) does not jeopardize the conduct of the investigation, including but not limited to the safety or security of persons, and/or (ii) is not in contravention of any laws applicable to it. Following the investigation, the Implementing Partner shall advise UNDP of any actions taken by it or any of the other entities further to the investigation.

b) The Implementing Partner shall establish that it has complied with the foregoing, to the satisfaction of UNDP, when requested by UNDP or any party acting on its behalf to provide such confirmation. Failure of the Implementing Partner, and each of its sub-parties referred to in paragraph 4, to comply of the foregoing, as determined by UNDP, shall be considered grounds for suspension or termination of the Project.

180. Social and environmental sustainability will be enhanced through application of the UNDP Social and Environmental Standards (http://www.undp.org/ses) and related Accountability Mechanism (http://www.undp.org/secu-srm).

181. The Implementing Partner shall: (a) conduct project and programme-related activities in a manner consistent with the UNDP Social and Environmental Standards, (b) implement any management or mitigation plan prepared for the project or programme to comply with such standards, and (c) engage in a constructive and timely manner to address any concerns and complaints raised through the Accountability Mechanism. UNDP will seek to ensure that communities and other project stakeholders are informed of and have access to the Accountability Mechanism.

182. All signatories to the Project Document shall cooperate in good faith with any exercise to evaluate any programme or project-related commitments or compliance with the UNDP Social and Environmental Standards. This includes providing access to project sites, relevant personnel, information, and documentation.

183. The Implementing Partner will take appropriate steps to prevent misuse of funds, fraud or corruption, by its officials, consultants, responsible parties, subcontractors and sub-recipients in implementing the project or using UNDP funds. The Implementing Partner will ensure that its financial management, anti-corruption and anti-fraud policies are in place and enforced for all funding received from or through UNDP.

184. The requirements of the following documents, then in force at the time of signature of the Project Document, apply to the Implementing Partner: (a) UNDP Policy on Fraud and other Corrupt Practices and (b) UNDP Office of Audit and Investigations Investigation Guidelines. The Implementing Partner agrees

to the requirements of the above documents, which are an integral part of this Project Document and are available online at www.undp.org.

185. In the event that an investigation is required, UNDP has the obligation to conduct investigations relating to any aspect of UNDP projects and programmes in accordance with UNDP's regulations, rules, policies and procedures. The Implementing Partner shall provide its full cooperation, including making available personnel, relevant documentation, and granting access to the Implementing Partner's (and its consultants', responsible parties', subcontractors' and sub-recipients') premises, for such purposes at reasonable times and on reasonable conditions as may be required for the purpose of an investigation. Should there be a limitation in meeting this obligation, UNDP shall consult with the Implementing Partner to find a solution.

186. The signatories to this Project Document will promptly inform one another in case of any incidence of inappropriate use of funds, or credible allegation of fraud or corruption with due confidentiality.

Where the Implementing Partner becomes aware that a UNDP project or activity, in whole or in part, is the focus of investigation for alleged fraud/corruption, the Implementing Partner will inform the UNDP Resident Representative/Head of Office, who will promptly inform UNDP's Office of Audit and Investigations (OAI). The Implementing Partner shall provide regular updates to the head of UNDP in the country and OAI of the status of, and actions relating to, such investigation.

13. UNDP shall be entitled to a refund from the Implementing Partner of any funds provided that have been used inappropriately, including through fraud or corruption, or otherwise paid other than in accordance with the terms and conditions of the Project Document. Such amount may be deducted by UNDP from any payment due to the Implementing Partner under this or any other agreement. Recovery of such amount by UNDP shall not diminish or curtail the Implementing Partner's obligations under this Project Document.

Where such funds have not been refunded to UNDP, the Implementing Partner agrees that donors to UNDP (including the Government) whose funding is the source, in whole or in part, of the funds for the activities under this Project Document, may seek recourse to the Implementing Partner for the recovery of any funds determined by UNDP to have been used inappropriately, including through fraud or corruption, or otherwise paid other than in accordance with the terms and conditions of the Project Document.

Note: The term "Project Document" as used in this clause shall be deemed to include any relevant subsidiary agreement further to the Project Document, including those with responsible parties, subcontractors and sub-recipients.

14. Each contract issued by the Implementing Partner in connection with this Project Document shall include a provision representing that no fees, gratuities, rebates, gifts, commissions or other payments, other than those shown in the proposal, have been given, received, or promised in connection with the selection process or in contract execution, and that the recipient of funds from the Implementing Partner shall cooperate with any and all investigations and post-payment audits.

15. Should UNDP refer to the relevant national authorities for appropriate legal action any alleged wrongdoing relating to the project, the Government will ensure that the relevant national authorities shall actively investigate the same and take appropriate legal action against all individuals found to have participated in the wrongdoing, recover and return any recovered funds to UNDP.

16. The Implementing Partner shall ensure that all of its obligations set forth under this section entitled "Risk Management" are passed on to each responsible party, subcontractor and sub-recipient and that all the clauses under this section entitled "Risk Management Standard Clauses" are included, *mutatis mutandis*, in all sub-contracts or sub-agreements entered into further to this Project Document.

172. MANDATORY ANNEXES

A. Multi year Workplan
B. GEF Core indicators
C. Terms of Reference for Project Board, Project coordinator, Chief Technical Advisor and other positions as appropriate
D. UNDP Social and Environmental and Social Screening Template (SESP)
E. UNDP Risk Log (to be completed by UNDP Country Office, see template below)
F. HACT micro assessment
G. UNDP Project Quality Assurance Report
H. Monitoring Plan
I. Evaluation Plan
J. Detailed profile of concerned communes and villages
K. Synthesis of the reports of national consultants
L. Stakeholder Engagement Plan
M. Gender Analysis and Action Plan
N. List of consulted people (national and village level), provided in a separate PDF file.
O. Co-financing letters