



GEF-6 PROJECT IDENTIFICATION FORM (PIF)

PROJECT TYPE: Full-sized Project

TYPE OF TRUST FUND: Least Developed Countries Fund

For more information about GEF, visit TheGEF.org

PART I: PROJECT INFORMATION

Project Title:	Climate resilience in the Nakambe Basin		
Country(ies):	Burkina Faso	GEF Project ID: ¹	9318
GEF Agency(ies):	UNDP (select) (select)	GEF Agency Project ID:	5429
Other Executing Partner(s):	National Council for Sustainable Development (CNDD)	Submission Date:	30 Sep 2015
		Resubmission Date:	17 Nov 2015
			29 Mar 2018
GEF Focal Area(s):	Climate Change	Project Duration (Months)	60
Integrated Approach Pilot	IAP-Cities <input type="checkbox"/> IAP-Commodities <input type="checkbox"/> IAP-Food Security <input type="checkbox"/>	Corporate Program: SGP <input type="checkbox"/>	
Name of parent program:	N/A]	Agency Fee (\$)	419,540

A. INDICATIVE FOCAL AREA STRATEGY FRAMEWORK AND OTHER PROGRAM STRATEGIES²

Objectives/Programs (Focal Areas, Integrated Approach Pilot, Corporate Programs)	Trust Fund	(in \$)	
		GEF Project Financing	Co-financing
CCA-1 Reduce the vulnerability of people, livelihoods, physical assets and natural systems to the adverse effects of climate change	LD CF	3,500,000	5,000,000
CCA-2 Strengthen institutional and technical capacities for effective climate change adaptation	LD CF	500,000	5,000,000
CCA-3 Integrate climate change adaptation into relevant policies, plans and associated processes	LD CF	416,210	800,000
Total Project Cost		4,416,210	10,800,000

B. INDICATIVE PROJECT DESCRIPTION SUMMARY

Project Objective:						
Project Components	Financing Type ³	Project Outcomes	Project Outputs	Trust Fund	(in \$)	
					GEF Project Financing	Co-financing
1. Planning and management of short as well as long-term climate risks	TA	Build capacity of the Directorate General for Nakambe Water Agency (DG-EAN) and communities on the use of climate & hydrological information/services for extreme climate risk management	1.1 Training programme to Nakambe Water Agency Directorate developed to collect and analyse data on climate change vulnerability and risks 1.2 Harmonized vulnerability assessment and adaptation strategy suitable	LD CF	705,914	5,000,000

¹ Project ID number will be assigned by GEFSEC and to be entered by Agency in subsequent document submissions.

² When completing Table A, refer to the excerpts on [GEF 6 Results Frameworks for GETF, LD CF and SCCE](#).

³ Financing type can be either investment or technical assistance.

			<p>to the Nakambe river environment developed and DG-EAN technical staff trained to carry out the same</p> <p>1.3 Communication and institutional framework to disseminate Warning to rural population including vulnerable communities developed</p> <p>1.4 Hydrologists, Civil Protection workers and Provincial Government officers equipped to develop flood/drought forecast and manage disaster</p>			
--	--	--	---	--	--	--

2. Increasing the resilience of communities to climate-induced risks and variability	INV	Climate risk Management and sustainable forestry practices adopted by smallholder farmers.	2.1 Bank terracing and plant buffers established to rehabilitate riverbank and reduce soil erosion 2.2 Livelihood grants provided to Local Water Communities to set up micro enterprises 2.3 Climate resilient varieties of drought/flood resistant seeds (e.g. Sorghum, Millet, maize) identified and disseminated to selected farmers supported by seasonal climate forecast services 2.4 Community-based enterprises established and strengthened for women's and youth groups to access financing, credits, marketing of products and managing value chains.	LDCE	3,500,000	5,000,000
Subtotal					4,205,914	10,000,000
Project Management Cost (PMC) ⁴				LDCE	210,296	800,000
Total Project Cost				LDCE	4,416,210	10,800,000

For multi-trust fund projects, provide the total amount of PMC in Table B, and indicate the split of PMC among the different trust funds here: ()

C. INDICATIVE SOURCES OF CO-FINANCING FOR THE PROJECT BY NAME AND BY TYPE, IF AVAILABLE

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Amount (\$)
Recipient Government	SP CNDD	In kind	300,000
Recipient Government	Ministry of Agriculture, water resources, sanitation and food security, Nakambe Water Agency, and the General Direction of Meteorology (DGM)	Grant	5,000,000

⁴ For GEF Project Financing up to \$2 million, PMC could be up to 10% of the subtotal; above \$2 million, PMC could be up to 5% of the subtotal. PMC should be charged proportionately to focal areas based on focal area project financing amount in Table D below.

Recipient Government	General Direction of Meteorology (DGM)	Grant	5,000,000
GEF Agency	UNDP	Grant	500,000
Total Co-financing			10,800,000

D. INDICATIVE TRUST FUND RESOURCES REQUESTED BY AGENCY(IES), COUNTRY(IES) AND THE PROGRAMMING OF FUNDS ^{a)}

GEF Agency	Trust Fund	Country/ Regional/ Global	Focal Area	Programming of Funds	(in \$)		
					GEF Project Financing (a)	Agency Fee (b) ^{b)}	Total (c)=a+b
UNDP	LDCF		CCA	N/A	4,416,210	419,540	4,835,750
Total GEF Resources					4,416,210	419,540	4,835,750

a) Refer to the [Fee Policy for GEF Partner Agencies](#).

E. PROJECT PREPARATION GRANT (PPG)⁵

Is Project Preparation Grant requested? Yes No If no, skip item E.

PPG AMOUNT REQUESTED BY AGENCY(IES), TRUST FUND, COUNTRY(IES) AND THE PROGRAMMING OF FUNDS

Project Preparation Grant amount requested: \$					PPG Agency Fee:		
GEF Agency	Trust Fund	Country/ Regional/Global	Focal Area	Programming of Funds	(in \$)		
					PPG (a)	Agency Fee ⁶ (b)	Total c = a + b
UNDP	LDCF		Climate Change Adaptation	N/A	150,000	14,250	164,250
Total PPG Amount					150,000	14,250	164,250

⁵ PPG requested amount is determined by the size of the GEF Project Financing (PF) as follows: Up to \$50k for PF up to \$2m (for MSP); up to \$100k for PF up to \$3m; \$150k for PF up to \$6m; \$200k for PF up to \$10m; and \$300k for PF above \$10m. On an exceptional basis, PPG amount may differ upon detailed discussion and justification with the GEFSEC.

⁶ PPG fee percentage follows the percentage of the Agency fee over the GEF Project Financing amount requested.

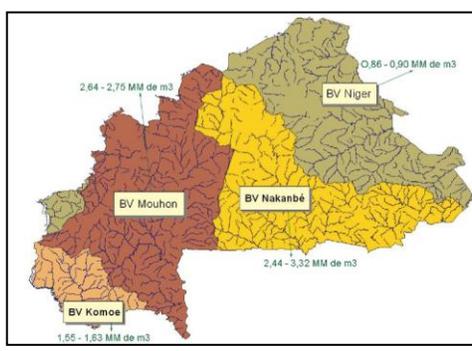
F. PROJECT'S TARGET CONTRIBUTIONS TO GLOBAL ENVIRONMENTAL BENEFITS⁷

Provide the expected project targets as appropriate.

Corporate Results	Replenishment Targets	Project Targets
1. Maintain globally significant biodiversity and the ecosystem goods and services that it provides to society	Improved management of landscapes and seascapes covering 300 million hectares	<i>Hectares</i>
2. Sustainable land management in production systems (agriculture, rangelands, and forest landscapes)	120 million hectares under sustainable land management	<i>Hectares</i>
3. Promotion of collective management of transboundary water systems and implementation of the full range of policy, legal, and institutional reforms and investments contributing to sustainable use and maintenance of ecosystem services	Water-food-ecosystems security and conjunctive management of surface and groundwater in at least 10 freshwater basins;	<i>Number of freshwater basins</i>
	20% of globally over-exploited fisheries (by volume) moved to more sustainable levels	<i>Percent of fisheries, by volume</i>
4. Support to transformational shifts towards a low-emission and resilient development path	750 million tons of CO _{2e} mitigated (include both direct and indirect)	<i>metric tons</i>
5. Increase in phase-out, disposal and reduction of releases of POPs, ODS, mercury and other chemicals of global concern	Disposal of 80,000 tons of POPs (PCB, obsolete pesticides)	<i>metric tons</i>
	Reduction of 1000 tons of Mercury	<i>metric tons</i>
	Phase-out of 303.44 tons of ODP (HCFC)	<i>ODP tons</i>
6. Enhance capacity of countries to implement MEAs (multilateral environmental agreements) and mainstream into national and sub-national policy, planning financial and legal frameworks	Development and sectoral planning frameworks integrate measurable targets drawn from the MEAs in at least 10 countries	<i>Number of Countries:</i>
	Functional environmental information systems are established to support decision-making in at least 10 countries	<i>Number of Countries:</i>

PART II: PROJECT JUSTIFICATION

1. *Project Description.* Briefly describe: 1) the global environmental and/or adaptation problems, root causes and barriers that need to be addressed; 2) the baseline scenario or any associated baseline projects, 3) the proposed alternative scenario, GEF focal area⁸ strategies, with a brief description of expected outcomes and components of the project, 4) [incremental/additional cost reasoning](#) and expected contributions from the baseline, the GEFTF, LDCF, SCCF, and [co-financing](#); 5) [global environmental benefits](#) (GEFTF) and/or [adaptation benefits](#) (LDCF/SCCF); and 6) innovation, sustainability and potential for scaling up.



Climate change induced problem

Burkina Faso is a landlocked country situated in the heart of West Africa. Four (4) major watersheds mainly drain the country: the Niger River Basin, Nakambe River basin, the Mouhoun basin and the basin of the Comoe. The Nakambe is the most populated area. About 85% of national water storage capacity is held in reservoirs located on the Nakambe or its tributaries⁹. Ouagadougou is almost entirely dependent on this basin surface water. Despite its importance, the Nakambe River is subjected today to a strong

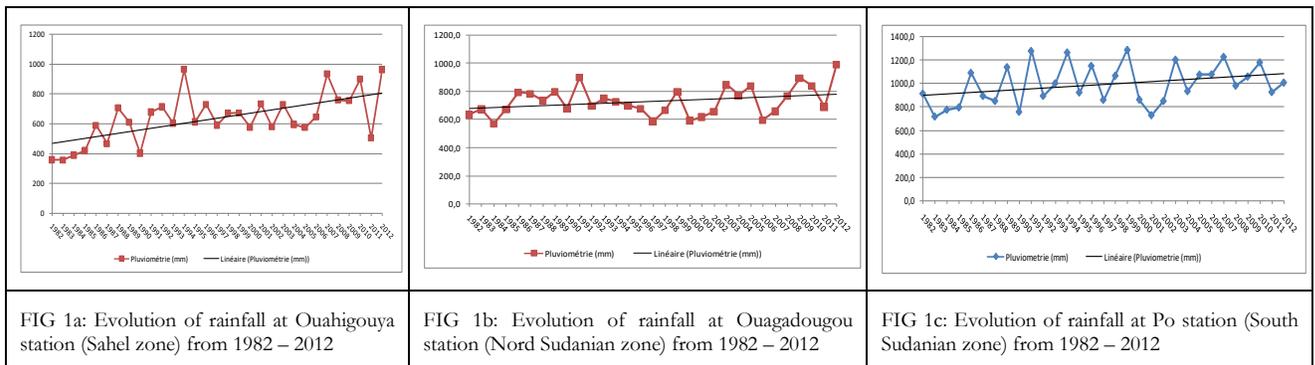
⁷ Provide those indicator values in this table to the extent applicable to your proposed project. Progress in programming against these targets for the projects per the *Corporate Results Framework* in the [GEF-6 Programming Directions](#), will be aggregated and reported during mid-term and at the conclusion of the replenishment period. There is no need to complete this table for climate adaptation projects financed solely through LDCF and/or SCCF.

⁸ For biodiversity projects, in addition to explaining the project's consistency with the biodiversity focal area strategy, objectives and programs, please also describe which [Aichi Target\(s\)](#) the project will directly contribute to achieving.

⁹ CECCI Philippe & al: Towards an Atlas of Lakes and Reservoirs in Burkina Faso http://www.smallreservoirs.org/full/toolkit/docs/Ha%2002%20Faso%20MAB_ML.pdf

degradation due to the combined effects of climate (change and variability) and anthropogenic activities (agriculture, deforestation, overgrazing, etc.).

Changes in the Basin's climatic trends are significant with precipitation values decreasing over the last few decades, reducing water-fed agriculture, drying up perennial streams faster, and having a significant impact on water availability. The analysis of climate parameters (1982-2012)¹⁰ in the basin ecoregions (sahelian & Sudanian) has showed that a clear variability but with a tendency to increase in annual precipitation (see FIG 1a,b&c). Rainfall declined rapidly between 1950 and the mid-1980s, and recovered in the 1990s. Between 2000 and 2009, however, the recovery stalled, and the 2000–2009 average remained about 15 percent lower than the 1920–69 mean average.



Source: GWP West Africa/CONEED (2013)

Regarding the temperatures, the USGS (2012) estimates that the 1975 to 2009 warming has been more than 0.5°C for Burkina Faso during the June–September rainy season. Given that the standard deviation of annual air temperatures in these regions is low (0.4°C), these increases represent a large (+1.2 standard deviations) change from the climatic norm, showing that Burkina Faso is becoming significantly hotter.

The trend over the period 2006 to 2050 indicates warming in the basin, with temperatures increasing the most in the North where the forecast suggests temperature rise in the order of 2.2 to 2.3°C. An extended analysis of the historical discharges on the Nakambe carried out by Mah'e et al. (2005) and Mah'e and Patrel (2009) showed that conversely to rainfall decrease, river discharges increased strongly in this basin after the 1970s compared to the period before 1970. This increase reached 193% for the period 1974–2008 compared to the period 1955–1973. In the last decade 1991–2000, discharges were 2.2 times higher than before 1970.

With regard to precipitation, future trends of river discharges differ from one regional climate models to another. Compared to the decade 1991–2000, the RACMO and REMO models predict an increase of discharges for coming decades. This increase goes up to 156% during the decade 2031–2040 for RACMO and 68% during 2011–2020 for REMO. The RCA/SMHI model shows first a decrease of discharges (up to 17%) for the two decades 2011–2020 and 2021–2030, and then an increase (up to 36%) for the decades 2031–2040 and 2041–2050, compared to 1991–2000¹¹.

Changes to current and historical rainfall patterns will lead to changes in the hydrological regime, leading to significant changes in water availability. The changes in the aggregate volume of water and changes in its temporal and seasonal distribution have been observed over the past decades resulting in, increasingly, more serious and less predictable water shortages, the drying up of some of some sections of the river and frequent flooding. The interviews with the various socio-professional groups revealed that manifestations of climate change are felt at many levels across some climatic parameters such as temperature, rainfall and winds. The consequences are appreciated through some landmarks like (i) the early drying of perennial water points, (ii) limited water storage, early drying of wells, lack of water points for livestock conducting to high pressure on land around water points and thus a strong accelerated degradation of hydraulic infrastructure, (iii) and increasing

¹⁰ GWP West Africa/CONEED (2013): étude et cartographie de la vulnérabilité aux changements climatiques des ressources en eau du sous bassin du Nakambe

¹¹ H. Karambiri & Al. 2011: Assessing the impact of climate variability and climate change on runoff in West Africa: the case of Senegal and Nakambe River basins. http://onlinelibrary.wiley.com/store/10.1002/asl.317/asset/317_ftp.pdf;jsessionid=034E71B71A70334FD5AD244A1A65058C.f02t01?v=1&t=9v1sydc&s=47d6e9979d6c889929d10f7a83e425d8e14c6423

conflicts between users (farmer-breeders), etc. Changes in hydrological systems may also include increased siltation and riverbank erosion. Indeed, driven by climatic changes but also by seeking additional sources of income, farmers and other agricultural entrepreneurs occupied the riverbanks to develop the irrigation during dry season cropping. These farmers are clearing without limit up to the minor riverbeds. This practice speeds up the drying, silting and erosion of the riverbeds.

Barriers and baselines

Managing Nakambe water resources in light of climate changes and socio-economic development is now an emergency and a challenge regarding the increase in water/land demand resulting from the strong growth of rural population, the development of cities, and industrial/mining activities. **The preferred solution** proposed by project is to reduce the vulnerability of Nakambe river communities to anthropogenic climate change with focus on strengthening the resilience of both these livelihoods and of agro-ecological and hydrological systems to withstand additional climate stressors. This requires good command of climate information applied to water resources management and communities' disasters risks management, the implementation of measures of protection and restoration of rivers bank, as well as communities' livelihood sustainability and policies reforms to ensure communities, means and guidance promoting better resilience. However, the implementations of such measures require to overcome key barriers in a context of country vulnerability to exogenous shocks like low rainfall/rainfall variability, international financial and oil crises, and regional instability.

Barrier #1: The Nakambe River Agency and other relevant national actors have limited knowledge and means to generate hydro-meteorological information. There is a very limited observation network in sub-basin affected by drought & floods and the institution lack of available and historical data to produce and disseminate reliable information on flood/drought forecasting in the context of management of water resources. This result from inadequate investments into regional and local level capacity development for climate resilient information and decision-making systems. The spatial analysis of the vulnerability of exposed elements (populations and infrastructures), combined with analysis of potential socioeconomic impacts would allow for an assessment and a complete cartography of flood/drought risks.

Barrier# 2: Inexistence of community disaster risks early warning system in the Nakambe Basin. The communities living in areas of high risk of extreme weather events are not sufficiently reached in term of prevention and response mechanisms. There is lack an efficient communications system at local level; language of communication – mainly in French, which a larger number of Mossi communities do not understand; a restricted type of media of communicating the information to stakeholders. The institution also lacks information communication experts to transform technically sound information to down to earth easily understandable messages that will catch the attention and interest of end users so that they can make use of the information and take remedial or adaptation measures.

Barrier #3: weak resilience capacity of communities. Poor communities living in the Nakambe basin have very little knowledge of resilient farming methods (plant density, drought resistant varieties of local crops, suitable seed provision, mulch application, etc.), and low-cost water conservation/irrigation technologies in areas prone to diminishing or highly variable rainfall during crop growing season. In the basin Centre North region, a great percent of the population is rural and has subsistence agriculture as their main source of income. Therefore, subsistence and small scale (rain-fed) farming is the predominant feature and this includes both livestock and drylands crop farming with sorghum and corn as the main cereals. Natural disasters related to erratic climate conditions (e.g., extreme heat, alternating periods of drought and flooding) represent a strong handicap. A wide range of technical compounds these climate-related challenges and institutional constraints, including inadequate infrastructure, limited access to markets, market uncertainty, weak capacity of producer organizations, and lack of financing, poor sectoral coordination, and political instability.

Barrier #4: Increased risks on water availability caused by anthropogenic and climatic factors. Even though the per capita water availability of the basin may be perceived as normal, deforestation, land degradation, and high population growth rate coupled with climate change will exacerbate the growing scarcity on water resources as water supplies dwindle and become insufficient to meet the water demands of the growing population. As water crises are forecasted for the future, and meeting the water demands of the increasing population in the Nakambe basin is closely tied to understanding and the development of water resources in order to prevent their depletion in the face of climate change.

The **baselines** of the LDCF financed project are on-going activities relating to the management of water, development of agriculture, coupled with activities that strengthen livelihoods. Donor-financed projects, programmes and initiatives support many of these activities. The baseline interventions includes the following:

- Domestic financing from the Nakambe Water Agency, the Ministry of Agriculture, water resources, sanitation and food security and the General Direction of Meteorology (DGM) which mission is to continuously assess and monitor meteorological network in the basin, the levels of the river, promote IWRM, organise training and awareness for local communities, support the establishment and animation of local water committees and contribute to the development and application of the Master Plan for the Development and Management of Water Resources (SDAGE) of the Nakambe Basin. The expected co-financing is 5 million.
- The second phase of the “*Rural Sector National Program*” (PNSR II) of Ministry of Agriculture, water resources, sanitation and food security started in December 2017 and will close in December 2021 and is being implemented at a national level, with the 13 regions of Burkina Faso involved. The objective of the programme is to contribute sustainably to food and nutritional security and to a strong economic growth and poverty reduction. This baseline represents \$5 million, to be later confirmed can serve as co-financing for this project.
- The National Council for Sustainable Development (CNDD) will coordinate the project for Sustainable Development by playing a key role in supporting the project and ensuring the coordination and synergies with other projects, programs and initiatives, it will also provide the necessary institutional support. This involvement in the project will represent an estimated amount of US\$ 300,000 of in-kind co-financing for the project.
- UNDP will provide a co-financing of US\$ 500,000 for technical and management support services.

Incremental /additional cost reasoning

The Government of Burkina Faso is requesting support from the Least Developed Countries Fund for Adaptation to remove the existing barriers by strengthening local capacity to effectively respond to and manage the climate change risks threatening water resources, agricultural production and livelihoods. The Project will focus on Centre North of the Basin in which significant productivity and production increases are deemed possible and where food security and poverty challenges are high. It will achieve this through the following Components: (i) planning and management of short as well as long-term climate risks; and (ii) increasing the resilience of communities to climate-induced risks and variability.

Component 1: Planning and management of short as well as long-term climate risks

Baseline for Component 1

The Direction of application and prevention of meteorological risks (DAPRM) is ensuring the prevention and monitoring extremes meteorological and climatic events. DAPRM is working closely with the structures in charge of civil protection and humanitarian organizations for the safeguarding of persons and property. The Direction of climatology and meteorological network (DCRM) ensures the functioning of the network of conventional observations of atmospheric parameters, carrying data storage, processing and dissemination. However, in the Nakambe Basin no comprehensive flood and drought Forecasting and Community Early Warning System exists to forewarn the population of sudden extreme weather and hydrological events. There are no system in place for the forecasting and warnings to be received in real time or to be able to adjust the forecast to local topographic and environmental conditions. Currently, the forecasting products issued from the General Direction of Meteorology (DGM) do not include local provincial weather information. Communications systems are still over the telephone line requiring an updating and installation of a more reliable Internet communication channels, enabling real time data and information exchange between the Province and DGM. The General Directorate on Water Resources (DGRE) is responsible for operating and maintaining a surface hydrological monitoring network of 15 water level meters, and 3 Acoustic Doppler Current Profiler (ADCP) flow meter in the Nakambe River. However, data is sent either weekly or monthly via post or telephone to DGRE, often resulting in critical delays which have made early warnings for flooding practically impossible.

The estimated amount of ‘the baseline project’ for Component 1 represents \$5 million

Other complementary baseline not associated to the co-financing

PAGIRE: has made important progress since 2003 (2 phases of 6 years) with respect to developing a body of policies and operational tools related to IWRM. At the scale of hydrographic basins there are specific tools for planning and programming water resource management. These are the Master Plan for the Development and Management of Water Resources (SDAGE) for the Nakambé Basin, and the Sub-Basin Water Resource Management Master Plans (SAGE). The National Water partnership (PNE-Burkina Faso) is undertaking relevant studies for the Development Scheme and Water Management (SDAGE). The validation workshop organised on January 2015 highlighted the need to update data on climate change and adaptation in the basin. Yet, there is room for a much stronger integration of climate change impacts and adaptation measures into Nakambe SDAGE. The SDAGE is not endorsed yet, however, the scenarios were finalized. The PAGIRE project, by supporting all the administrative regions of the country have directly benefited the Nakambe Basin by promoting an improvement on water resource management.

Adaptation alternative - with LDCF Intervention

LDCF financed project will take advantage of existing capacities of the Direction of Water Management (DGRE), and the General Direction of Meteorology to collect, analyse and disseminate weather and hydrological forecast services. Additional resources are required from the LDCF to build capacity of the Directorate General for Nakambe Water Agency (DG-EAN) and communities on the use of climate & hydrological information/services for extreme climate risk management. LDCF resources will be used to achieve the following outputs:

Output 1.1: Generating climate projection scenarios and climate impact scenarios. The objective is to identify and quantify climate change vulnerability and risk through building regional capacity to collect and analyse data, and expanding the overall knowledge base on climate change impacts and associated physical and economic vulnerabilities.

Output 1.2: Based on the capacity gap identified during the PPG phase, build the capacity of the Directorate General for Nakambe Water Agency (DG-EAN) to formulate and analyse adaptation policy options, and develop the multi-sectoral adaptation strategies, and implementation action plans. LDCF will be used to prepare vulnerability and risk assessments, using the climate projection model, the climate impacts model, and the vulnerability and risk assessment approach. It will also develop an harmonised vulnerability assessment and adaptation strategy approach appropriate to the Nakambe river environment, and capacity building at the regional specialised agencies to carry out vulnerability assessments and develop adaptation measures.

Output 1.3: Develop a communication and institutional framework for warning dissemination to end users including vulnerable communities. The communication framework will build on the work conducted by the UNDP LDCF EWS project; and

Output 1.4: Boost the technical capacity of the Directorate General for Nakambe Water Agency (DG-EAN) through training, to systematically streamline digital information (e.g. using GIS platform to generate vulnerability and risk maps) to support decision making in sector planning. There will be also specific training of hydrologists, Civil Protection and Provincial government officers, to be technically skilled to develop flood/drought forecasting, disaster management and rural development activities. This extensive capacity development will fill the gaps identified to be able to execute, collate and process data and information of the FEWS and UNDP LDCF EWS project monitoring and dissemination components.

Component 2: Increasing the resilience of communities to climate-induced risks and variability

Baseline for Component 2

The second phase of the “Rural Sector National Program (PNSR II) implemented by the Ministry of Agriculture, water resources, sanitation and food security is a nationwide project. The achievements of PNSR will be significant for the proposed GEF funded project, specifically in term of: (1) improving food security and sovereignty; (2) increasing income for rural communities; (3) sustainable development of natural resources; (4) improving access to drinking water and a healthy environment; and (5) developing partnership among rural actors. The activities of the proposed project will in turn benefit the PNSR II as they will help achieve its objectives, in particular (1.4) the sustainable management of water and (2.1) the development of a more market-

oriented agriculture. This baseline represents \$5 million, of which an amount to be later confirmed can serve as co-financing for this project.

Adverse economic, social and environmental impacts of these challenges are acute in the Nakambe River. The high population density and poverty have led to significant human pressure on the environment and degradation of the basin's natural resource base, notable land and forests. The growing population expands land area under cultivation and exploits forests and woodlands for agriculture production. Deforestation, soil erosion and sedimentation form the most serious threats to the environment and natural resource, resulting in the increased incidence of erosion, run-off and flash floods. High loads of sediment are deposited in riverbeds, reservoirs and floodplain wetlands, affecting irrigation canals, fisheries and hydropower generation. The current climate variability and change will have a broader range of impacts on individual households that have low capacity to manage climate risks and the limited number of available coping mechanisms. This situation is creating additional obstacles for households, particularly women, to achieving familial food security.

Adaptation alternative - with LDCF Intervention

This Outcome 2 is primarily concerned with increasing the resilience of communities to climate-induced risks and variability. This will be achieved via access to locally innovative climate change adaptation responses such as sustainable agricultural and forestry practices in watersheds to increase vegetation coverage, reduce erosion, and improving the efficiency of water use in agriculture and reducing vulnerability to drought and flood. LDCF resources will be used to achieve the following outputs:

Output 2.1: Rehabilitate and manage riverbank in priority sub catchment for reduced erosion and improved livelihoods. LDCF resources will support (i) the establishment of bank terracing, vegetative buffers, etc. to increase the infiltration and reduce erosion; (ii) forestry and rural energy interventions to restore forest cover.

Output 2.2: Provision of livelihood grants to the Local Water Committees (CLE) to enable them to undertake productive livelihood initiatives and enable CLE to set up micro enterprises and other income generating activities. A second pressing need that should be considered under the long-term solution is the dissemination and uptake of locally specific, climate-resilient, varieties of drought- and flood-resistant seeds (particularly for sorghum and food crops) that are suited to ecological conditions in the Basin. The LDCF-funded project should support the characterization of these drought resistant seed varieties. Subsequently, dissemination of these adapted seeds will be carried out in collaboration with CNRH and selected farmer's fields so to enhance the resilience capacity of local vulnerable communities. In addition, establishment and dissemination of short- term seasonal climate forecasts as part of the early warning system would support climate-resilient seed dissemination in the Basin and extension outreach. These forecasts will support farmers' decision-making process in specific farming operations such as planting, harvesting and husbandry decisions.

Output 2.3: Build market-based & entrepreneurial capacity of women/ young groups & producers. The capacity of beneficiaries on entrepreneurship, marketing of products, managing value chains, and accessing financing and credit will be strengthened. In addition, connections between producers, organizations and micro credit agencies will be built.

Adaptation benefits, Innovativeness, sustainability and potential for scaling up

Basin Planning activities are designed to set up a long-term knowledge base for the Basin and improve systematic hydro-climatological monitoring and inflow/flood forecasting. As an adaptive measure, community EWS (component 1) will allow the monitoring and implementation of anticipatory measures to reduce climate change risks on those sectors, ultimately benefiting the poorest segments of society, those who do not necessarily benefit from large protective infrastructure projects. Furthermore, improving the Community EWS also provides benefits for long term planning and helps Hydrological, Meteorological and other institutions build capacity to service other needs for example by providing long-term datasets for monitoring and trend detection.

Riverbed affected by erosion will be restored in priority zones with high climate risks to improve water retention capacity upstream and support resilient subsistence activities. These interventions will have impact on agricultural growth: soil and land management practices, thereby resulting in higher agricultural productivity of high value crops grown on this land. With the rehabilitation of lowlands, the business and employment opportunities in improved micro-enterprises will likely increase.

Diversification of local livelihood strategy is an adaptation action that will increase the resilience of subsistence livelihoods cost-effectively. Not only does this reduce poverty through income-generation actively, it also increases food security and improves the nutritional level of households. The project will build operational and financial capacity of target households for a sustainable, long-term solution that can ensure access to credit and thereby continuous support to durable solutions after the exit of the project.

The sustainability will be improved through the facilitation of the integration of climate risk management into key strategic water policy (SDAGE). This is likely to provide an enabling environment that will catalyse adaptation action. This will be further strengthened by the close coordination between the activities conducted under the outcome 1 and the EWS project. Overall, the project's activities will improve awareness regarding climate change impacts, particularly in the water sector, rural development and agriculture and food security and effective means to adapt to such impacts. In so doing, the project will make the case for the project's adaptation measures to stakeholders at all levels and thereby ensure their sustainability after the project lifetime. Communities and local entrepreneurs will contribute to the project investing not only their time and facilities but by providing as well their knowledge and labour. The participative approach and the empowerment of grassroots beneficiaries aside with state authorities and Burkina Faso's research institutes and universities is also a guarantee for the long-term sustainability of the intervention. The strengthening of livelihoods and food security (through crop diversification, improved agricultural practices, short cycle seeds..etc) are important contribution towards sustainability because these are activities that once started and consolidated will not require project support or funds. Sustainable land management practices (reforestation, bunding an water harvesting structures, erosion control...etc) in the upper catchment of the watershed will also have impacts on the sustainability of this project by creating a more resilient watershed with more water retention, less run off and soil erosion.

The project is being implemented also in selected communities representing the core population of the Centre North of the Basin. There is thus, considerable potential for widespread replication of the interventions at a larger basin scale as well as the neighbouring watersheds. Local-level stakeholders will be capacitated and involved in implementing the project's activities thereby ensuring that the project delivers tangible benefits. This will improve the likelihood of replication of such activities in additional sites, as stakeholders will be capacitated with the skills to replicate activities and will be exposed to the benefits associated with successful activities. The project will generate important documentation of studies and analyses that will be widely disseminated through workshops and existing knowledge networks. Importantly, the project will ensure that project lessons emerging from key project activities, riverbed restoration, community adoption of drought, flood resistant crop varieties and small-scale adaptive initiatives are documented.

2. *Stakeholders.* Will project design include the participation of relevant stakeholders from [civil society](#) and [indigenous people](#)? (yes /no) If yes, identify key stakeholders and briefly describe how they will be engaged in project design/preparation.

The National Council will coordinate the project for Sustainable Development for Sustainable Development (CNDD), under the Ministry for Environment and Sustainable Development. CNDD, with support from UNDP, will play a pivotal role in project support and ensuring the coordination and synergies with other projects, programs and initiatives, and it will provide necessary institutional support. SP-CNDD has signed a partnership agreement combining key institutions to support the National Framework for Climate Change research initiatives. Partnership members include the General Directorate for Meteorology (DGM), the National Research Institution for Environment and Agriculture and the University of Ouagadougou. Together, an ad-hoc working group for climate change has represented these ministries. The group has jointly conducted climate change research, namely, climate trend studies, climate scenarios, vulnerability assessments and evaluations of adaptation costs using tools for mid and long-term adaptation planning.

SP CNDD will ensure an active involvement and participation of the different stakeholders. Key stakeholders for the project include (i) ministries, local governments and other public institutions implementing the project and/or benefiting from it, (ii) cooperating partners, NGOs, and Civil Society Organizations (CSOs) involved in direct support, and (iii) communities that are living in the targeted rural areas, including the participation of potentially vulnerable groups such as women.

3. *Gender Considerations.* Are [gender considerations](#) taken into account? (yes /no). If yes, briefly describe how gender considerations will be mainstreamed into project preparation, taken into account the differences, needs, roles and priorities of men and women.

The project will include a gender analysis in order to ensure that there is equal participation of men and women in decision-making processes and the implementation of adaptation activities and that women do not face the current inequalities as part of the project implementation. The project believes that gender mainstreaming will lead to more resilient communities and therefore, more successful adaptation. It will be ensuring the participation of the most vulnerable groups, including women, in the preparation of the document process, and, as in the NAPA project upon which this is building, women and young will be the largest beneficiaries of investments.

The specific vulnerabilities and needs of women will be considered at all stages of project design, from preliminary Vulnerability and Capacity Assessments to project implementation, and particularly when developing climate-resilient income-generating activities (that will be designed to meet their needs), sustainable mechanisms for transmission of climate and weather forecasts (that will be important to their decision-making imperatives and delivered using channels that are relevant to them). At the same time, recognition will be given to women’s comprehensive knowledge of and experience with respect to, for example, seed selection, local hydrology, and community transformation, as well as coping strategies that can promote adaptation to climate change. Information about climate change and adaptation measures must therefore be designed during PPG in gender-sensitive ways and be combined with explicit efforts to ensure that women and girls – especially those who are poor or have been denied the right to an education – can easily have access to and absorb the necessary information.

4 *Risks.* Indicate risks, including climate change, potential social and environmental risks that might prevent the project objectives from being achieved, and, if possible, propose measures that address these risks to be further developed during the project design (table format acceptable).

Risk	Level	Mitigation
Capacity of community (organisation, illiteracy) to sustainably manage the investment and results.	M	The project will work to build capacity at local level, including via the process of developing local adaptation plans. Capacity building through awareness-raising, training on climate change, their impacts and possible adaptation options, and close assistance to impulse climate resilient management at the community level is necessary
Social resistance hinder the adoption of new resilient practices	M	The project will develop a stakeholder’s involvement plan and the establishment and operationalization of appropriate local level participatory platforms for project execution, specifically considering gender dimensions.
Potential Environmental & social safeguards	M	During the preparatory phase, the project will prepare an Environmental and Social Management Framework (ESMF), to be integrated in the project document, that describe and propose measures and plans to reduce, mitigate and/or offset adverse impacts and enhance positive impacts

5. *Coordination.* Outline the coordination with other relevant GEF-financed and other initiatives.

SP CNDD, from the Ministry of Environment of Burkina Faso, is the focal point for GEF projects in Burkina Faso. Through this role and its strong participation in the proposed project, SP CNDD will ensure a good coordination between the different GEF projects, by making sure that the lessons learned, the knowledge, the know-how, etc. from previous projects are well integrated into this project.

GEF ID	Agency	Project	Areas of coordination	During the Project Preparation Grant

5014	FAO	Integrating Climate Resilience into Agricultural and Pastoral Production for Food Security in Vulnerable Rural Areas Through the Farmers Field School Approach	Through the strengthening and upscaling of Farmers Field Schools, the project will develop operational measures and practices to adapt to climate change that will be disseminated over a large number of agro-pastoralist in Burkina Faso. These practices and measures can be integrated into the proposed project, in particular into the Outcome 2.	(PPG), in-depth consultations will be carried out in order to establish partnerships, practical modalities for cooperation with the listed ongoing initiatives so as to avoid duplication and allow the resources to draw from the progresses and achievements made thanks to such initiatives.
5003	UNDP	Strengthening Climate Information And Early Warning Systems in Africa for Climate Resilient Development and Adaptation to Climate Change: Burkina Faso	The UNDP LDCF project Early Warning Project supported the installation of 100 water level monitors placed on 11 manual, hydrological stations and 8 acoustic Doppler flow meters (ADCP) for the National Hydrological Service (DGRE). All equipment includes data transmission/processing/storage facilities, which feed into hydrological forecasting models. As mentioned earlier, some of the EWS installed within the EWS project are situated in the Nakambe project area, benefiting the project by providing improved accuracy of weather forecasts and climate information. This project also provides improved capacity of the end-users to understand, analyse and make use of climate data. The Famine Early Warning Systems Network (FEWS NET) funded by the U.S. Agency for International Development (USAID) is an information system designed to identify problems in the food supply system that could potentially lead to famine or other food-insecure conditions. The FEWS NET data portal provides access to geo-spatial data, satellite image products, and derived data products in support of FEWS NET monitoring needs throughout the world. Burkina Faso is one of the participating countries of FEWS NET and currently exploits the satellite image products.	
4971	UNDP	Adapting natural resource dependent livelihoods to climate induced risks in selected landscapes in Burkina Faso: the Boucle du Mouhoun Forest Corridor and the Mare d'Oursi Wetlands Basin	The aim of the project is to adapt natural resource dependent livelihoods to climate induced risks in selected landscapes in Burkina Faso. It is expected that the lessons learned in terms of adaptation may be used by the proposed project, in particular for component 2 which aims at increasing the resilience of communities to climate-induced risks and variability	
8032	UNDP	Promoting index-based weather insurance for smallholder farmers in Burkina Faso	Through the investment of this project in hydro-meteorological and climate information services, this project will provide additional climate information that will benefit the targeted areas. The insurance coverage will help the beneficiaries face climate shocks better and provide subsistence farmers with a safety net that reduces the risks they take when innovating in climate resilient agricultural practices.	

1966	UNDP	National Capacity Self-Assessment (ANCR II)	The assessment determined the challenges of countries' underlying capacities to meet their global environmental commitments, particularly commitments that are framed by the three conventions. ANCR II also disseminates collected environmental data information on a on its platform. The proposed project can use collected data for the project development and implementation and share with others its own data on this platform.
4928	UNDP	Protected Area Buffer Zone Management in Burkina Faso – Zones Tampons	Some of the approaches developed under this project on biodiversity may be used on protected areas in the Nakambe basin.
3259	UNDP	Country Partnership Program on Sustainable Land Management (CPP)	There are 3 CPP projects in Burkina Faso: CPP at National Coordination, CPP Centre West and CPP Boucle Mouhoun. CPP National Coordination has its activities at national level and develops a series of tools for a better management of land which could be relevant for the future GEF-project, particularly in its component 2 which consists in increasing the resilience of communities to climate induced risks and vulnerability. Furthermore, CPP has specific objectives such as: (a) developing and implementing a sustainable partnership for an enhanced coordination and an equitable and integrated approach to sustainable land management; (b) promoting an institutional and political enabling environment to better tackle and implement sustainable land management in Burkina Faso; and (c) fostering the promotion of an equitable and integrated approach to sustainable land management including indigenous and innovative practices. All the best practices of land management of this project will be used by the future project.

6. *Consistency with National Priorities.* Is the project consistent with the National strategies and plans or reports and assessments under relevant conventions? (yes /no). If yes, which ones and how: NAPAs, NAPs, ASGM NAPs, MIAs, NBSAPs, NCs, TNAs, NCSAs, NIPs, PRSPs, NPFE, BURs, etc.

Burkina Faso has also defined national actions and policies oriented to creating a basis for sustainable development. The project strategy and proposed outputs are consistent with national development priorities, and have close substantive and institutional links and complementarities with the primary national development strategies and plans including:

- The SCADD and '2025 Vision', both of which stress importance of climate risk to sustainable development and economic growth, and emphasize the links with natural resource management and ecosystem services.
- The Rural Development Strategy (RDS), where the objective is to ensure sustainable development of the rural sector in view to contributing to the fight against poverty, by consolidating food security, access to water and promoting sustainable development.
- The National Policy for the Environment (2007), which stresses the sound management of natural resources and their contribution to the country's economic development.
- The Forestry Code (1997, currently being updated), which emphasizes the importance of managing forest resources rationally.
- The National Water Policy (2007) and the Action Plan for Integrated Water Resource Management (PAGIRE), which covers two phases, the current one being 2009-2015, and which seeks to increase access to water and sanitation through IWRM, while placing the management of scarce water resources

high on the national agenda with a long-term and integrated view. Both the Water Policy and its Action Plan stress the importance of wetlands, especially those of international

- The Economic and Social National Development Plan (PNDES), which is the guiding document for Burkina Faso's Development strategy,
- The National Strategy for Climate Change learning,
- The Sectorial Policy for environment, green economy and climate change.

The project is also fully aligned with the UNDAF outcome #1 "Accelerated, sustainable and pro-poor economic growth", which address adaptation to climate change specified in the National Strategy on Climate Change as a matter of priority. It responds directly to UNDAF Output 1.4: "National and grassroots structures practice an integrated approach sustainable management of natural resources and take into account the effects of changes climate through adaptation and mitigation".

Burkina Faso has also developed a unique NAPA coordination unit under the supervision of the Executing Agency for the EBA project, SP-CNDD. More specifically, the project is aligned with NAPA priorities, first of all in terms of 'sectors' – i.e. the project addresses (i) water resources; and (ii) food security sectors, which feature high among the 12 priority actions of the NAPA. The project addresses in different ways the following priority actions foreseen in the NAPA:

- #4 on Fodder production and development of fodder stocks for livestock in the Sahelian Region of Burkina Faso
- #6 on Control of sand encroachment/mud silting in the river basins of Mouhoun, Nakanbé and Comoé
- #8 on Protection of pastoral-suited regions in the Sahelian and Eastern regions (
- #11 Implementation of safety zones and backup devices to control pollution of underground and surface water catchment infrastructures (lakes, wells, boreholes) in the cotton belts of Burkina (Mouhoun, South-West, Comoé and the Eastern part of Nakanbé)

In February 2015, with the support of UNDP, Japan ODA, the GEF and the GWP, a meeting was organized and gathered 100 representatives from 40 national institutions, associations, civil society and technical and financial partners for the national kick-off of the Burkina Faso NAP. This workshop introduced the results of the preliminary research and results of the NAP process. This resulted in a NAP report submitted in May 2015, with the identification of 5 priority axis. The project is strongly aligned with most of the priority axis of the NAP process:

- **Strategic Axis #1:** Build long-term capacities of institutions involved in climate change adaptation
- **Strategic Axis #2:** Improve information systems
- **Strategic Axis #4:** Reduce the country's overall vulnerability to climate change
- **Strategic Axis #5:** Systematically integrate climate change adaptation into development policies and strategies

7. Knowledge Management. Outline the knowledge management approach for the project, including, if any, plans for the project to learn from other relevant projects and initiatives, to assess and document in a user-friendly form, and share these experiences and expertise with relevant stakeholders.

Results from the project will be disseminated within and beyond the project intervention zone 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 project implementation though lessons learned. The project will identify, analyze, and share lessons learned that might be beneficial in the design and implementation of similar future projects. Finally, there will be a two-way flow of information between this project and other projects of a similar focus.

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

A. RECORD OF ENDORSEMENT¹² OF GEF OPERATIONAL FOCAL POINT (S) ON BEHALF OF THE GOVERNMENT(S):

(Please attach the [Operational Focal Point endorsement letter\(s\)](#) with this template. For SGP, use this [SGP OFP endorsement letter](#)).

NAME	POSITION	MINISTRY	DATE (MM/dd/yyyy)
Haoua Sary	Permanent Secretariat of CNDD Operational Focal point	Point Focal Operationnel Du Fonds Pour L'envnironement Mondial (FEM)	15/09/2015

B. GEF AGENCY(IES) CERTIFICATION

This request has been prepared in accordance with GEF policies¹³ and procedures and meets the GEF criteria for project identification and preparation under GEF-6.

Agency Coordinator, Agency name	Signature	Date (MM/dd/yyyy)	Project Contact Person	Telephone	Email
Adriana Dinu, Director, Sustainable Development (Environment) a.i. Executive Coordinator, Global Environmental Finance		03/29/2018	Ms. Clotilde Goeman	+90 534 0733159	clotilde.goeman@undp.org

C. ADDITIONAL GEF PROJECT AGENCY CERTIFICATION (APPLICABLE ONLY TO NEWLY ACCREDITED GEF PROJECT AGENCIES)

For newly accredited GEF Project Agencies, please download and fill up the required [GEF Project Agency Certification of Ceiling Information Template](#) to be attached as an annex to the PIF.

¹² For regional and/or global projects in which participating countries are identified, OFP endorsement letters from these countries are required even though there may not be a STAR allocation associated with the project.

¹³ GEF policies encompass all managed trust funds, namely: GEFTF, LDCF, and SCCF