United Nations Development Programme

Project Document template for projects

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Project title: Restoring and Enhancing the Value of Degraded Lands and Forest Ecosystems for Enhanced Climate Resilience in Benin (PIRVaTEFoD-Benin)		
Country(ies): Benin	**Implementing Partner (GEF Executing Entity):** General Directory of Environment and Climate (DGEC), under the Ministry of the Living Environment and Sustainable Development (MCVDD)	**Execution Modality***:* FULL National Implementation (NIM)
Contributing Outcome (UNDAF/CPD, RPD, GPD)*: Outcome 1:* By 2023, the populations, in particular the most vulnerable, will improve their resilience and quality of life through access to decent employment, food and nutritional security, clean energy, and the sustainable management of natural resources, adverse effects of climate change, crises and disasters		
UNDP Social and Environmental Screening Category: 1		**UNDP Gender Marker:** 2
Atlas Award ID: 00140000		**Atlas Project/Output ID:** 00129365
UNDP-GEF PIMS ID number: 6514		**GEF Project ID number**: 10688
LPAC meeting date: 15 May 2022		
Latest possible date to submit to GEF: 31 January 2022		
Latest possible CEO endorsement date: 11 December 2022		
Project duration in months: 72 months		
Planned start date: 01 November 2022		**Planned end date**: 01 November 2028

Expected date of Mid-Term Review: 01 November 2025	**Expected date of Terminal evaluation**: 01 June 2028

Brief project description:

In recent years, degradation and loss of land, forest and natural habitats—in a context increasingly marked by a changing climate—has begun to seriously undermine human development in Benin. Land degradation has impacted negatively on the productivity of ecosystems in Benin. It is estimated that about 2.2 million hectares of land, equal to 19% of the national territory, were degraded between 2000 and 2010. During this period, observed climate variability and change, such as changes in seasonal distribution and precipitation patterns, more intense rains, higher temperatures and stronger wind storms, have increased and are beginning to have an increasingly significant impact on ecosystem services and agricultural outcomes.

The project will:

i) promote sustainable, climate resilient production systems in degraded lands and deforestation hotspots in Benin;

ii) facilitate the development of green infrastructure, selected through integration of climate scenarios and resilience potential under current climatic stressors, to strengthen the Green Belt as a nature-based solution against desert advancement and support communities in climate change adaptation in the north of the country;

iii) strengthen the protection and preservation of forest ecosystems located in large agricultural production basins;

iv) identify and promote gender responsive, climate resilient value chains and increase productivity and competitiveness of the horticultural sectors, and;

v) facilitate the mobilization of innovative financing and the involvement of private sector for the scaling up and sustainability of climate resilient agriculture, climate risk informed sustainable land and forest management, including facilitating market and credit access for producers involved in the resilient development of livelihoods.

The project will address a range of barriers and challenges and will be carried out at national, communal, and local site levels where degraded lands have been targeted for improved, climate risk-informed land management practices to support the achievement of Benin's LDN goals and to help meet national NDC objectives for climate change adaptation.

Financing Plan	
GEF Trust Fund grant	4,566,667
Least Developed Countries Fund (LDCF)	4,466,210
UNDP TRAC resources (to be administered by UNDP)	480,000
UNDP (in-kind support)	800,000
(1) Total Budget administered by UNDP	**10,312,877**
(2) Total confirmed co-financing to this project not administered by UNDP	**46,992,615**
(3) Grand-Total Project Financing (1) + (2) (USD)	**57,305,492**

Signatures:		
Signature: print name below	Agreed by Government Development Coordination Authority[1]	**Date/Month/Year:** within 25 days of GEF CEO endorsement
Signature: print name below	Agreed by Implementing Partner[2]	**Date/Month/Year:** within 25 days of GEF CEO endorsement
Signature: print name below	Agreed by UNDP[3]	**Date/Month/Year:** within 25 days of GEF CEO endorsement

1 Other evidence of government agreement may be accepted in lieu of a signature, unless the programme country government requires a signature.

2 Not required when UNDP is the implementing partner (i.e. DIM implementation modality). If a UN Agency is the implementing partner, and has signed a SBEAA with UNDP, then the Government Development Coordination Authority, UNDP and UN Agency sign the project document. If an IGO is the implementing partner, and has signed a SBEAA with UNDP, then the Government Development Coordination Authority, UNDP and IGO sign the project document. If a CSO/NGO is the implementing partner, the Government Development Coordination Authority and UNDP sign the project document and attached it to the Project Cooperation Agreement to be signed by the CSO/NGO and UNDP.

3 For NIM projects this is the Resident Representative. For DIM projects in a single country this is the Resident Representative. For global, regional DIM projects this is BPPS.

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ACRONYMS AND ABBREVIATIONS

FSP	Full Sized Project
GEF	Global Environment Facility
GEFSEC	Global Environment Facility Secretariat
MSP	Medium Sized Project
PIF	Project Identification Form
PIR	GEF Project Implementation Report
POPP	Programme and Operations Policies and Procedures
PPG	Project Preparation Grant
STAP	GEF Scientific Technical Advisory Panel
BPPS NCE	Bureau for Policy and Programme Support, Nature, Climate and Energy

II. DEVELOPMENT CHALLENGE

The Republic of Benin is a low-income, food-deficit country with a predominantly rural population estimated at 11.2 million. A politically stable democracy since 1990, with a socio-political environment that is friendly and conducive to business, the country nevertheless ranked 158 of 189 countries on the 2020 Human Development Index. The national poverty rate stood at 40.1 percent in 2015.

Agriculture is the primary economic activity in Benin. In 2019, it accounted for 28% of gross domestic product (GDP) and employed 70% of the workforce, while also being highly exposed to climatic pressures. Agriculture in Benin is mainly practiced on smallholder farms, with over 70% of the population practicing subsistence agriculture for their livelihoods.

This section of the project document explores Benin's development and adaptation challenges as they relate to agriculture, land use and climate change. It consists of three brief sub-sections. First, it presents an analysis of problems and causes of land degradation in the context of a changing climate. Second, it identifies solutions and baseline activities aimed at encouraging their adoption. Third, it presents an analysis of barriers which are standing in the way of widespread adoption of available solutions, and, to some extent, to innovation and ingenuity needed to develop and disseminate new approaches in ways that take full account of climate change. Together, these sections lay a foundation for the project intervention, which is presented in Sections II and III below.

PROBLEMS AND CAUSES

In recent years, degradation and loss of land, forest and natural habitats—in a context increasingly marked by a changing climate—has begun to seriously undermine human development in Benin. Land degradation neutrality (LDN) is defined by the UNCCD as "a state whereby the amount and quality of land resources, necessary to support ecosystems functions and services and enhance food security, remains stable or increases within specified temporal and spatial scales and ecosystems".4 Land degradation has impacted negatively on the productivity of ecosystems in Benin, with reductions amounting to 19.1% for cultivated land, 18.7% for shrub savannah and 20.2% for forests5. It is estimated that about 2.2 million hectares of land, equal to 19% of the national territory, were degraded between 2000 and 2010.6 During this period, observed climate variability and change, such as changes in seasonal distribution and precipitation patterns, more intense rains, higher temperatures and stronger wind storms, have increased and are beginning to have an increasingly significant impact on ecosystem services and agricultural outcomes.[7]

Benin is ranked 155 out of 181 in the ND-GAIN index of climate change vulnerability, indicating that it is highly vulnerable yet unready to adapt to climate change. In recent

[4] See https://www.unccd.int/actions/achieving-land-degradation-neutrality

5 Note Politique NDT 2017.

[6] CENATEL 2017

[7] https://reliefweb.int/sites/reliefweb.int/files/resources/Benin.pdf

decades, both droughts and rainfall intensity have intensified in the country, resulting in increased drought stress during the dry seasons (one long dry season per year in the north, one long and one short dry season in the south), as well as flooding and soil erosion. These effects have been particularly notable in the south but have also affected the north of the country where rainfall can be locally very intense.

According to projections, the combination of drought and flooding could reduce national food production by 6% by 2025 (estimates range from -3% to -18% for agricultural production by 2025, and one study projected a loss of 5 to 25% of maize production – a main staple – for the north of the country over the same time period), thereby negatively affecting food security. Increased flooding, which has cost around 50 human lives in addition to extensive material damage in 2010 alone, is exacerbated by the increasing destruction of gallery forests for charcoal production[8]. Herders, including ethnic Peulh in the north of Benin (PDA 1 and 2), have been particularly affected by drought due to the drying up of grasses and small water drains. This has jeopardized the sustenance of livestock (Donou et al., 2008) and forced herders to migrate from North Benin with their herds to the southern parts of the country in search of water and pasture. It has also led to increased pressure on natural resources, with rising levels of damage to crop fields and increased conflicts between farmers and herders. Finally, it has created tensions with government services in cases where herders are unable to pay fines imposed on them for not respecting passageways, entering protected areas with their herds, setting fires, etc.

Women are particularly affected by climate change in Benin because, according to the socio-cultural standards in force in the project intervention area, women cultivate their husbands' fields before cultivating their own fields and therefore are more likely to be directly affected by weather-related disturbance of the agricultural schedule (sowing, harvesting, weeding, fertilizer application (SAP Benin Project, 2014). Drought also leads to an increase in the time devoted to non-productive work for women, e.g., fetching wood and water from greater distance. In short, climate change has already become a significant contributing factor in a negative spiral of land use, degradation and depletion of natural capital, with significant impacts on livelihoods—both present and future.

In addition to degraded areas, other land and habitat, including 14.8% of remaining shrub savannah, and 21.3% of forest areas, were converted entirely between 2005 and 2020. In area terms, national forest coverage, estimated at 8.12 million hectares in 2007, fell to 7.9 million hectares in 2016, a loss of over 215,000 hectares.

In Benin, between 2005 and 2015, areas of natural forest types declined in favor of non-forest formations and plantations. Wooded savannah open forests were the biggest losers, with a decline in area of nearly 45% during this 10-year period. Meanwhile, dense forests lost 31% of their area and mangroves lost 25% of their area. The greatest expansions were made by dwellings, which increased by 73% of their initial area and by crops and fallows which increased by 55%. One exception was that of crops and fallows under oil palm, which

[8] https://reliefweb.int/sites/reliefweb.int/files/resources/Benin.pdf

actually decreased by 48% in area. A 2.5% increase in water bodies corresponds to the creation of several dams and reservoirs and the effects of flooding of certain riparian areas during the period. Finally, reforestation and afforestation efforts resulted in a 73% increase in the area of fruit plantations and a 14% increase in forest plantations.[9]

As land has degraded, agricultural productivity has been affected, and poverty has increased. Thus, while land degradation in 2007 cost Benin's economy an estimated US$ 490 million, or about 8% of GDP,[10] poor and vulnerable groups bore a large portion of this burden. Large areas of land are completely depleted and no longer suitable for cultivating the food crops commonly grown in Benin, such as cassava, yam, maize, cotton, rice, vegetable crops, pineapples, cashew nuts and oil palm trees. Land degradation has significant negative impacts on the resilience and adaptive capacity of local communities and amplifies the risks facing them, including those stemming from increasingly frequent climate events.

A somewhat tangled web of cause and effect, including climate change and a number of positive feedback effects, appears to underlie this cycle of poverty and degradation. This sub-section will look first at the problems / impacts, before attempting to describe and connect these to various levels of causes. The project's Theory of Change (see **Figure 1** below, p.37-38) identifies a number of significant environmental impacts / damages, including the following[11]:

- *Declining soil quality*: Factors associated with declining soil quality include leaching, acidification and compaction.
- *Soil erosion* (loss): Water erosion threatens significant portions of the country's agricultural production and includes splash, runoff and gully erosion.[12]
- *Climate change trends and impacts*: Documented changes include: (i) late and heavy rains, contributing to increased flooding, landslides and stream bank erosion, especially in the south of the country, but also affecting the north (ii) periods of drought and drying up waterbodies, especially in the northern parts of Benin (iii) changes in the seasonal calendar, (iv) heavy winds, and (v) increased temperatures. For example, the annual number of wet days and annual total maximum 30-day rainfall declined from the 1960s to 2000,[13] while the short-term intensity of rainfall has increased, leading to more

[9] Ahononga et al. 2021

[10] UNCCD 2018

[11] Causes are discussed below (see p.13-15).

[12] Moriaque, Akplo Tobi et. al. 2019. "Factors influencing soil erosion control practices adoption in centre of the Republic of Benin: Use of multinomial logistic". Journal of Agricultural Science: Vol 11, No 17. Accessed at https://www.ccsenet.org/journal/index.php/jas/article/view/0/40804

13 https://reliefweb.int/sites/reliefweb.int/files/resources/Benin.pdf

flash floods and soil erosion. Heavy rains, riverine floods, burst riverbanks and intense storms affected a total of 35,850 people in 2021[14].

- *Trends in agricultural production*: As a result of the above-mentioned climate trends, maize yields may decrease by 5 to 25% in the north of the country by 2025. For example, under climate scenarios detailed in the Third National Communication of Benin (TCN 2019)[15], the maize variety EVDT (90 days) could experience a yield reduction by 16.7% and 8.9%, respectively, by 2030 and 2050, compared to a 1981-2010 baseline, while yield reductions for the SYN variety (75 days) could reach 21.6% and 28.8%. For niébé (cowpea, *Vigna unguiculata*), yield declines of 26.7% and 26.1%, respectively, have been projected for the same time horizons. Maize and cowpea being the local staple crops in the center and north of the country, such impacts would directly and substantially affect the food security of the local population, as well as their opportunities to generate an income from the sale of surplus agricultural produce. Groundnuts and cotton would be less affected by climate change (or, in the case of groundnut, could even slightly benefit) according to these projections, with cotton yield declines of about 0.9 percent in 2030 and 6.3 percent in 2050. For cassava, which is a staple crop in the south of the country, yield increases have been projected as a consequence of increasing temperature and the crop's low sensitivity to climate variation and infertile soils; however, this would mainly benefit populations in the south of the country, since cassava is not a preferred crop in the north where maize, sorghum and millet predominate. For yams, the preferred staple in the central parts of the country, yield declines by up to a third have been projected by mid-century as a consequence of high temperature extremes combined with drought, exacerbated by declining soil fertility—to which this crop is highly vulnerable[16].
- *Increased pest incursions and diseases*: Fruit fly invasions (*Bactrocera dorsalis*) have decimated mango production and caused significant losses in mango orchards.[17] The impact of climate change on crop and livestock pests and diseases, while generally considered a key factor, is not well understood and difficult to predict. Potential impacts include an increase in pests and diseases affecting small ruminants and cattle, leading to higher mortality. Temperature increases might also cause mortality in fish tanks which are an important alternative source of protein and income for many rural communities.
- *Pollution and silting up of waterbodies*: This problem is linked to a combination of factors such as agrochemical use, loss of stream bank vegetation and increasing frequency and intensity of heavy rainfall events, as well as longer dry spells and droughts.[18] Together, these factors lead to increased runoff and resulting water pollution, as well as reduced streamflow, decreased soil water infiltration, drying up of water points and overall reduction of water supply. Such changes affect some

[14] EM-DAT The International Disaster Database. Hydrological disasters in Benin. Accessed December 1, 2021. https://www.emdat.be/database

[15] https://unfccc.int/sites/default/files/resource/BENIN_TCN_2019.pdf

[16] https://reliefweb.int/sites/reliefweb.int/files/resources/Benin.pdf

[17] See http://www.fao.org/3/CA1323EN/ca1323en.pdf

[18] See https://reliefweb.int/sites/reliefweb.int/files/resources/West_Africa_CRP_Final.pdf

watersheds more than others, and may lead to modifications of plant and animal habitats with consequent impacts to livelihoods, e.g., fisheries, livestock breeding and small-scale farming.

- *Reductions in quantity and quality of vegetative cover*: This broad category of environmental change includes forest loss, as well as replacement of beneficial plant species with invasive, 'weedy' ones. Changes in temperatures, seasonality of rainfall, floods and/or more intense droughts also negatively impact certain plant species and habitats.
- *Loss of biodiversity and habitat in adjacent protected areas and forest reserves*[19]: Pendjari National Park and W Regional Park (shared by Benin, Burkina Faso and Niger), located in Atacora and Alibori Departments respectively, are two of the most protected and biodiverse semiarid grassland ecosystems in West Africa. They comprise part of the UNESCO World Heritage W-Arly-Pendjari Complex,[20] a refugium for the region's largest remaining population of elephants and West African lions.[21] Both Pendjari and W Parks are managed by the National Centre for Management of Wildlife Reserves (*Centre National de Gestion des Réserves de Faune*, CENAGREF) under the Ministry of the Living Environment and Sustainable Development. They are both co-managed by African Parks through a management agreement with the Government of Benin.[22]

The above environmental changes and impacts may be seen in environmental economic terms as constituting a significant loss of natural capital, i.e. a reduction in natural capital stocks. For the people of Benin, a range of economic and social impacts is associated with the declining flow of ecosystem services from this reduced natural capital stock. Among the most noteworthy socio-economic impacts are the following:

- *Impacts on agricultural productivity, including sudden crop losses associated with extremes of weather*: **Table 1** below gives an indication of the evolution of crop yields in recent years, while **Table 2** shows the recent evolution of total crop areas in the target PDAs. While annual production has increased, and most crops have shown increases in per ha. yields associated with agro-chemical use, these gains have been tempered by losses of natural capital associated with conversion and, in particular, land degradation and climate variability and change. The food system is impacted by both climate and non-climate (population and income growth, demand for animal-sourced products) related stressors. For instance, drought results in, among other things, increasingly long dry spells, scarcity of grazing and intensification of transhumance, and increased soil degradation, with a consequent drop in crop productivity. In part due to farmers' responsiveness to increased demand and population, many farmers use excessive synthetic fertilizers and pesticides. This increased pressure on farmers starts a cycle

19 Benin's classified forests are detailed on the Protected Planets portal: https://www.protectedplanet.net/country/BEN

20 UNESCO reference at https://whc.unesco.org/en/list/749/

21 African Parks: https://www.africanparks.org/the-parks/pendjari

22 Further information on African Parks's conservation and development efforts in Benin can be found at: https://www.africanparks.org/benin-government-commits-long-term-protection-w-national-park

where excessive pesticides and fertilizers are used, rendering the soil less profitable and more degraded. There are additional effects, such as water contamination, smaller yields, less variety, etc.[23]

Table 1: National synthesis of the achievements of the agricultural campaigns, 2015-2016 and 2019-2020

Crops	CAMPAIGN 2015-2016			CAMPAIGN 2019-2020		
	AREA (Ha)	YIELD (Kg/Ha)	PRODUCTION (T)	AREA (Ha)	YIELD (Kg/Ha)	PROD (T)
MAIZE	**1 003 715**	**1 281**	**1 286 060**	**1 470 250**	**1 075**	**1 580 750**
RICE	65 305	3 129	204 310	102 415	3 965	406 083
SORGHUM	131 553	986	129 674	151 065	1 059	160 000
MILLET	26 670	811	21 640	29 135	901	26 250
FONIO	2 054	752	1 543	5 881	799	4 700
TOTAL CEREALS	**1 229 296**		**1 643 227**	**1 758 745**		**2 177 783**
YAM	202 605	13 082	2 650 498	235 331	14 301	3 365 500
CASSAVA	284 033	12 043	3 420 665	319 299	14 173	4 525 450
SWEET POTATOES	10 016	5 532	55 405	9 468	6 274	59 400
TARO	559	2 921	1 634	588	3 117	1 831
POTATOES	6,18	13 866	86	307	11 522	3 534
TOTAL TUBERS	**497 220**		**6 128 288**	**564 992**		**7 955 715**

Source: Agricultural statistics direction, MAEP,2021

Table 2: Changes in agricultural area within PDAs, 2015 - 2020

Areas	PDA 1 (Karimama)	PDA 2 (Gogounou, Sègabana et Kouandé)	PDA 5 (Covè, Zagnanado, Aplahoué et Klouékammè)
Agricultural area (2015)	5,862,009 ha	50,892,807 ha	16,732,473 ha
Agricultural area (2020)	5,758,135 ha	48,475,679 ha	15,477,372 ha

[23] See https://www.ipcc.ch/srccl/chapter/chapter-5/; see also https://www.cabdirect.org/cabdirect/abstract/20036792676

Change (2015-2020) %	-11.01	4.99	8.11

- *Reduced flows of ecosystem services*: These include a range of provisioning (food, fibre, fresh water), regulating (climate, pollination, pests, soil quality), supporting (soil formation, nutrient cycling, primary production) and cultural (recreation, tourism, spiritual experience) services.[24]
- *Income losses, increased food insecurity and heightened vulnerability to famine*: Changes in precipitation patterns are resulting in fluctuating or declining yields in staple crops, fruits, and cash crops. Current vulnerability and future scenarios indicate declines in crop productivity, impacts on livestock and herders, and on natural habitats (as discussed above)[25]. Changes in the seasonal calendar, to which the rain-fed agricultural production systems have adapted over millennia, are resulting in damages to crops, shortened growing period and increased instances of pests, all leading to declining yields and food shortages. Lower and/or less predictable rainfall impacts vulnerable smallholder farmers and small-scale livestock herders most severely; many are also directly dependent upon the declining forest and savannah ecosystems for safety nets during times of climatic or economic shocks. Climate-linked impacts on farmers are most clearly seen in reports of damage to crops from water stress, high temperatures and stronger winds, disease and pests. Significant negative impacts also result from unpredictability of rainfall and changes in the onset and length of the wet and dry seasons, which challenge the seasonal calendar and lead to a decline in staple food crop yields, losses due to increased pests and diseases affecting both livestock and agricultural production, as discussed above.
- *Increased levels of conflict among groups*: This includes conflict between agriculturalists and herders, exacerbated by a context of resource scarcity, climate-driven migration and environmental degradation. Herders and agriculturalists livelihoods are intertwined, with herders often seeking the produce of agriculturalists, and agriculturalists requiring the dairy and meat from herders. Although they are interdependent, the relationship is fraught, as each group has competing priorities with environmental consequences; herders operate over wide geographic areas, seeking grazing land and water for their flocks, while agriculturalists need undisturbed land, fertile soil, and protected water. In the case of migration, fueled in increasingly large part by climate change, movements are in some cases fueled by the search for fertile land for framing and/or grazing cattle. Environmental conflict ensues when there is overuse of resources (on either side), pollution of a resource, or threat to either living. Herders may seek cultivated land for grazing as communal grazing land is viewed as degraded. Farmers may over-fertilize soil or clear land by burning, coming in conflict with herders.[26]

[24] See https://www.sciencedirect.com/science/article/abs/pii/S0048969721014820?via%3Dihub

[25] See Third National Communication to the UNFCCC. https://unfccc.int/sites/default/files/resource/BENIN_TCN_2019.pdf

[26] https://core.ac.uk/download/pdf/36771572.pdf; https://www.mdpi.com/2073-445X/10/4/425

- *Reduced resilience to climate changes and other shocks*: There is a compounding effect of the multiple environmental changes taking place, which have a tendency, in the absence of concerted effort to the contrary, to reduce resilience to further climate-change related shocks and disturbances. This raises significantly the risks facing vulnerable populations. Some of these risks for vulnerable population include: rapid urbanization with poor infrastructure and sanitation development has put stress on vulnerable populations displaced by coastal erosion; droughts threaten an already dire food security situation and the agricultural livelihoods of ~70% of the population; increased flooding and standing water will result in the spread of insects that spread infectious disease, such as malaria.[27]

The above factors of course do not operate in isolation from one another but rather have typically synergistic effects. For example, climate change interacts with and compounds the problems caused by deteriorating ecosystem services, landscape degradation, soil erosion and biodiversity loss, exacerbating livelihood risks and leading to displacement, emigration and/or food insecurity for many of the affected communities. Northwestern Benin (Atacora) has seen both in-migration from neighboring countries to the areas around Pendjari Biosphere Reserve and out migration/emigration due to food shortages, soil degradation, poverty and declining livelihoods.[28] In the southern plateau area, maize production during the short rainy season is no longer viable for many farmers because the area is flooded due to excessive rains and/or river floods.[29]

As noted, the above-described environmental and socio-economic impacts can be traced to a multi-level set of causes. These include:

(i) Root causes: These are defined as causes that are largely or entirely beyond the scope of the project to address, either due to their scale, their being determined exogenously, or both. They include:

- Demographic pressures caused by high population growth rates[30]
- Global climate change
- Economic drivers, including: (i) increasing demand for natural resources and agricultural products, (ii) poverty and economic inequality[31].

[27] See https://www.ifad.org/en/web/operations/w/country/benin; https://climateknowledgeportal.worldbank.org/country/benin/vulnerability?select_variable2=

28 Sow, P. S. Adaawen and J. Scheffran. 2014. Migration, Social Demands and Environmental Changes Amongst the Frafra of Northern Ghana and Biali in Northern Benin. Sustainability , 6 (1): 375-398. Sustainability. 6. 375-398.

29 Baudoin et. al. 2014. Small scale farmers' vulnerability to climatic changes in southern Benin: the importance of farmers' perceptions of existing institutions. Mitg.Adapt.Glob.Change.

[30] Increasing population may also have countervailing benefits, e.g. to innovation.

[31] (In rural areas, the incidence of poverty is higher (42%) than in urban areas (32%). The population spending less than a dollar a day is 63.5%. Poverty appears much more as a rural phenomenon in Benin, in an economic context mainly characterized by the preponderance of the agricultural sector (EMICoV, 2015).),

(ii) Underlying causes: These operate at an intermediate level of causality. They are determined in part by root causes and they, in turn, help to drive direct or proximate causes (see below). They include:

- Market failures which are causing natural capital and resources to be inadequately valued and economic activities to be inadequately diversified,
- National and local land management systems, including land tenure systems that incentivize short-term profit over long-term investment, overlap and lack of congruence between traditional and modern land management systems and failure to resolve land use conflicts (e.g. between farmers and herdsmen),
- Conflicting, and / or environmentally damaging, policies, regulations, decisions and plans linked to sector-specific outlooks and politicization of natural resource decision making,
- Human resources, especially women and youth, who, due to a variety of factors, are not able to achieve their potential as sources and disseminators of innovation and adaptation in the face of changing environmental circumstances.
- Primary and secondary baseline data about traditional and modern land use systems collected during the PPG and analysis of complementary data, highlight that the land use system on the project sites remains marked by a dualism of modern and customary rights. This legal dualism generates conflicts and does not facilitate the promotion of investments in sustainable agriculture or sustainable management of forest ecosystems. The traditional principles and practices of use remain carriers of symbolism and identity references[32]. This dualism can be identified also as dualism of formal and informal land use systems, that can coexist when the role of each is assessed and agreed by all the stakeholders involved.

(iii) Direct / proximate causes: Direct, or proximate causes are actions taken by individuals, usually at local level, that are directly causes or enabling land degradation associated environmental damages. They include:

- *Inappropriate agricultural cultivation practices*: These include slash and burn, shortened fallow, poor rotation / diversification practices. Together, they contribute to increased degradation, reduced agricultural yields and incentives for extensification onto new lands.
- *Expansion of agricultural area*: Depending on the category of land, this may consist of encroachment into protected areas and classified forests and conversion of existing forest and/or cultivation of other fragile, less productive lands. In the former case, important ecosystem services and natural capital—including biodiversity—is lost, while

[32] Avohouémè, B., and Mongbo, R., 2019

in the latter case impacts include declining labour productivity, as more effort is required to reach the same level of yield.

- *Overgrazing, uncontrolled foraging and damage to fields by livestock associated with transhumant communities*: Conflicts between pastoralists practicing transhumance and agriculturalists occur when livestock enter field prior to harvest or damage crops, and when land is cleared of grass growth and tree cover through overgrazing or uncontrolled burning. Without grasses and native trees to protect the soil, erosion can become a major issue for agriculturalists. It should be mentioned that the controlled entry of livestock into agricultural fields during the fallow season is a traditional practice and can contribute to soil fertility regeneration through manure, and is therefore not in itself a source of conflict, whereas excess livestock densities combined with uncontrolled burning to stimulate grass regrowth as well as excessive lopping of trees for fodder lead to the degradation of soil and vegetation. Therefore, the objective is not to exclude cattle herders from agricultural lands but rather to reach (or re-instate) agreements that are beneficial for both sides
- *Uncontrolled burning (bush fires) by herders, farmers and hunters to stimulate grass regrowth*: It is common that herders may burn grasslands to generate new growth; while controlled burns can be useful for both farmers and herders, uncontrolled burns can destroy quality fields or planted fields threatening crops and clearing out native plants and tree cover. On the other hand, farmers may clear out grazing lands for crops, reducing grasslands for herders. Uncontrolled burns lead to erosion issues, water pollution, destruction of trees, and social conflicts between groups.[33]
- *Inappropriate and illegal use of certain fertilizers and pesticides*: Although Benin has legislation on the management and use of chemicals and chemical waste, these laws are often ignored and the national institutions that should monitor and enforce these laws are weak. Banned, expired, or simply dangerous pesticides are often used without the proper protective equipment, leading to many deaths and illnesses per year.[34]

CLIMATE RISK

Benin's position in West Africa, between the Atlantic Ocean in the south and the Sahara in the north, and the seasonal movement of the Inner-tropical convergence zone (ITCZ) determine the country's climate, with decreasing rainfall from the south to the north and a pronounced seasonal contrast in rainfall between the wet and dry seasons. The country's northern regions in particular are its driest and hottest ones, characterized by a single rainy season and are among the most vulnerable to climate variability and change. Benin's ND-GAIN index was 159 out of 181 in 2019, characterizing the country as having high vulnerability to, and low readiness

[33] See https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKEwjJ-9OttJfzAhXRmFwKHR_ODWAQFnoECAMQAQ&url=https%3A%2F%2Fwww.mdpi.com%2F2073-445X%2F10%2F4%2F425%2Fpdf&usg=AOvVaw0SqUxnHT7Be1pFkOI2Q-Vd

[34] See https://www.unep.org/news-and-stories/story/waste-no-more-benin-confronts-long-history-chemical-waste-mismanagement

for, climate change.[35] The dependence of the country on agriculture and livestock increases its vulnerability to climate shocks (droughts, flooding), especially in its northern provinces with its long dry season and very intensive rainfalls during the rainy season. Climate models project an increase in temperature for the entire country, with increasing temperatures and reduced precipitation affecting both subsistence and cash crops, such as cotton[36].

The project design considers a range of current and projected climate risks and impacts. The climate projections used to inform this project design for Benin are based on multi-model ensembles for three emissions scenarios (RCP 2.6, 4.5 and 8.5), for projections up until 2050 for planning purposes. Under a more optimistic emissions scenario (RCP 2.6), northern Benin is projected to experience a median temperature increase of 0.8 ºC by 2050 and 1.1ºC for 2080 compared to reference levels by 2100. With RCP 4.5, projected median temperature increase in 2050 is almost 0.85 ºC and 1.75 ºC in 2080. Under a worst-case scenario, the medium temperature increase is 1.4 ºC in 2050, and 3.28 ºC in 2080. This pattern holds true for the whole of Benin (see **Figure 1** for projected temperature increases under these scenarios). As is evident from the figure, there is substantial overlap in the ranges of temperature anomaly up until mid-century for the three different emissions scenarios.

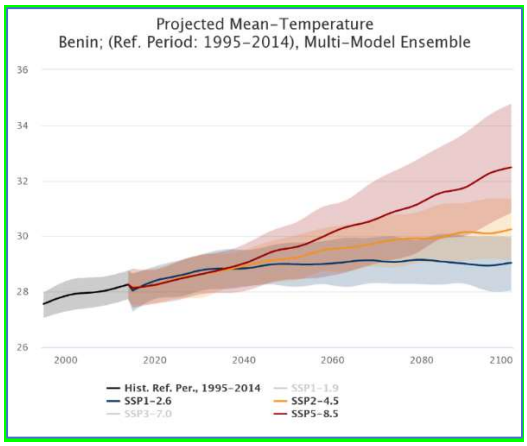


Figure 1: Projected mean temperature for whole of Benin based on ensemble models of three scenarios (RCP 2.6, 4.5 and 8.5)

Given the above, the project is designed to address not only impacts that are already observed but also to respond to the above range of anticipated temperature change, together with a corresponding range of potential impacts on the agricultural sector, on ecosystems, and on water resources through the planning horizon of 2050. Further description of a range of climate projections for Benin is available in the following embedded document (RCP 2.6, 7.0, 8.5) for the north (PDA 1 and 2) and the south (PDA 5):

[35] GAIN index summarizes a country's vulnerability to climate change and other global challenges in combination with readiness to improve resilience. Benin profile: https://gain.nd.edu/our-work/country-index/rankings/
Methodology: https://gain.nd.edu/assets/254377/nd_gain_technical_document_2015.pdf
[36] https://climateknowledgeportal.worldbank.org/country/benin/climate-data-projections

In the Niger Valley (PDA 1), desertification is a serious threat, with lower rainfall, changes in seasonality, stronger windstorms and droughts, while in the south (PDA5), rainfall variability and floods caused by intensive rainfall are becoming more frequent. Lower and/or less predictable rainfall impacts vulnerable smallholder farmers and small-scale livestock herders most severely, many of whom are also directly dependent upon the declining forest and savannah ecosystems for safety nets during times of climatic or economic shocks. For example, in northern Benin, delays and more erratic rainfall led to a decrease in cereal production by 5% in 2014 compared to yield in the previous year.[37] Climate impacts on farmers are most clearly seen in reports of damage to crops from water stress, high temperatures and stronger winds, disease and pests; unpredictability of rainfall and changes in the onset and length of the wet and dry seasons challenging the seasonal calendar and leading to a decline in staple food crop yields, increased pest and diseases affecting both livestock and agricultural production. As reviewed above, significant negative impacts of climate change on livestock herders and crop farmers have already been observed in Benin, including leading to increased conflicts among transhumant herders and local farmers, and major impacts on food security due to yield reductions for the main staple crops of the country (maize, cowpea, yam, etc) have been projected for the coming decades.

Average temperatures in the country have increased by 1.1ºC since the 1960s, with strongest increases in the north of the country. The average number of "hot" days increased by 39 in between 1960-2003 and "hot" nights by 73.[38] Heat waves have become common. The annual number of wet days and annual total maximum 30-day rainfall declined from the 1960s to 2000,[39] while intensity of rainfall has increased leading to more flash floods and soil erosion.

Projections for precipitation are variable and it is not clear whether average rainfall will increase or decrease; moreover, there has been a pronounced fluctuation of rainfall over the last decades, with high average rainfalls in the 1960, low rainfalls in the 1970s and 1980s, followed by increasing rainfalls in recent years. This fluctuation makes it difficult to distinguish climate change trends or to make projections for future climates, as is generally the case in West Africa due to its geographic position between the ocean and the desert. There is however an expectation that the percentage of rain that falls in high-intensity events is likely to increase.

Taken together, the above climate trends make Benin highly vulnerable to droughts, floods and wildfires. While rainfall trends are uncertain, the increasing temperatures especially in the north of the country will make drought events and dry season fires more likely, and rising rainfall intensities are likely further to increase the already prevalent risk of flooding throughout the country, especially if seen in combination with the wide-spread degradation of

[37] Men and women farmers in Benin are responding differently to climate change (theconversation.com)
[38] https://reliefweb.int/sites/reliefweb.int/files/resources/Benin.pdf
[39] https://reliefweb.int/sites/reliefweb.int/files/resources/Benin.pdf

the vegetation cover due to the expansion of agriculture. Climate change is likely to negatively affect agriculture and livestock production through recurrent droughts, wildfires and flooding. It could also affect the quality and reliability of water resources (e.g., seasonal drying up of wells especially in the north and contamination of water courses through flash floods), and could lead to increase in certain human and livestock diseases. Climate change interacts with and compounds the problems caused by deteriorating ecosystem services, landscape degradation, soil erosion and biodiversity loss, exacerbating livelihood risks and leading to displacement, emigration and food insecurity for many affected communities. Northwestern Benin (Atacora) has seen both in-migration from neighboring countries to the areas around Pendjari Biosphere Reserve and out migration/emigration due to food shortages, soil degradation, poverty and declining livelihoods.[40] In the southern plateau area, maize production during the short rainy season is no longer viable for many farmers because the soil is flooded due to excessive rains or river floods.[41] Based on climate projections recent studies have shown that current agricultural calendar could result in a reduction in yields of up to 20-50% by 2050 (Sarr, 2012).

The uncertainty of future climate change scenarios, particularly with respect to changes in precipitation, seasonality and intensity, which is typical for large parts of West Africa, suggests that land use interventions need to focus on increasing the resilience of populations and ecosystems to a range of climate change scenarios, including both drier and wetter future conditions. This general strategy also needs to take into account the interaction of climate with trends in land use and vegetation cover, such as increased risk of flooding due to the degradation of hill slopes and the occupation of lowlands by permanent agriculture. Moreover, it needs to consider the uncertainty even of current climate data, which in part results from the pronounced local variability of rainfall that is characteristic of the West African savanna regions.

Climate change is exacerbating the degradation of productive forest and agricultural lands in the target project PDAs in a number of ways. These effects have been documented in various reports and have been reported to the project development team in the course of multiple stakeholder consultation sessions that took place during their field visits.

For several decades, forest resources have been heavily degraded due to various anthropic pressures—anarchic/ lawless extension of agricultural and pastoral areas with occupancy of the beds of the rivers and other water bodies, impoverishment of soils and change of land use, etc. As far as major climate-related hazards having the greatest impacts on forest ecosystems and riparian communities, these are floods, heavy rains and drought. Livelihoods most affected by these factors include those of smallholder foresters and farmers.

Beyond these livelihoods, those of urban and rural wood craftsmen, transporters, hunters, traders in fuelwood and lumber and traders in non-timber forest products have also become

[40] Sow, P. S. Adaawen and J. Scheffran. 2014. Migration, Social Demands and Environmental Changes Amongst the Frafra of Northern Ghana and Biali in Northern Benin. Sustainability , 6 (1): 375-398. *Sustainability*. 6. 375-398.
[41] Baudoin et. al. 2014. Small scale farmers' vulnerability to climatic changes in southern Benin: the importance of farmers' perceptions of existing institutions. *Mitg.Adapt.Glob.Change.*

more vulnerable due to dwindling access to basic resources. Likewise, nurserymen (pépiniéristes) have faced increased vulnerability due to scarcity of seedlings.

Climate change is affecting the agriculture, livestock, fishing and aquaculture sectors within the project areas as follows:

- Increasingly long dry spells causing scarcity of grazing, increasingly pronounced soil degradation and corresponding declines in crop productivity;
- Violent rains which lead to a delay in the sowing periods of the main crops;
- Excessive heat and lengthening of the dry season responsible for the early and prolonged drying up of water resources needed for agricultural and transhumance activities;
- Disruption of the agricultural calendar, decline in agricultural yields, the disruption of fishing and aquaculture activities, the high mortality of livestock, etc. attributable to these climatic risks, with significant economic repercussions on the affected populations lives (poverty, food insecurity, low income, migration of the population, socio-professional group and ethnic conflicts, etc.).

Table 1 below presents details of the above impacts, disaggregated according to the three target PDAs.

Among the impacts of the above on the forest ecosystems of Benin are the decline of gallery forests, physiological and ecological dysfunction of certain forest ecosystems, the loss of biodiversity, regression of the populations of characteristic ligneous species (*Dialium guineenses, Sclerocarya birrea , Afzelia africana, Diospyros mespiliformis , Daniellia oliveri*, etc.), the reduction in the size of fauna populations and modified population structures of certain plant and animal species.

Table 3: Ongoing impacts of climate change, by PDA

	PDA1: Niger Valley		PDA2: Alibori Sud- Borgou Nord-2KP		PDA5: Zou-Couffo	
Climate risk	**Description**	**Impacts**	**Description**	**Impacts**	**Description**	**Impacts**
Floods	Overflow of rivers, mainly the Niger River, the Alibori, the Mekrou in the communes in August – September, due to the concentration of rainwater over a short period of the year (July-August)	- Flooding of rice fields and developed perimeters - Flooding of the lowlands of the municipality - Decline in yield due to the rotting of the roots of the plants and their yellowing - Loss of agricultural production (mainly rice) - Proliferation of waterborne diseases - Loss of agricultural and fishing equipment, etc. - Loss of livestock Contribution of humus	Mainly due to the overflow of rivers	- Decline in yield due to rotting of the roots of the plants and their yellowing - Loss of agricultural production	Overflow of rivers	- Impacts on maize, yam, cowpea, groundnut - Slow growth, yellowing of leaves and loss of crops; - Food insecurity; - Destruction of road infrastructure (eg bridges); - Disruption of human mobility and transport of agricultural products; - Multiplication of mosquitoes; - Destruction of certain dwellings; - Development of waterborne diseases, - Damage to fish farmers
Drought and pockets of drought	Lengthening of the dry season; severe in May - June and September - October Pocket of drought in the middle of the rainy season (15 to 30 days) at the municipal level	- Withering of plants and loss of crops - Scarcity of water points and pastures for animals - Increase in vegetation fires - Lots of resows - Withering of plants and loss of crops - Scarcity of water points and pastures for animals - High mortality of plants (especially young ones)	Lengthening of the dry season Pocket of drought in the middle of the rainy season (15 to 30 days) scale communal	- Wilting of plants and loss of crops - Difficulty for animals to drink - Mortality raised young plants - Increase in bush fires	Includes late rains and sudden stoppages of rains	- Impacts on corn, rice, yam, cowpea, cashew, groundnut; groundwater and wells; animals and plantations - Impoverishment of agricultural land, decline in yield and impoverishment of producers; - Disruption of the agricultural calendar; - Drop in groundwater level and drying up of wells; - Scarcity of fodder; - Drying up of watercourses; - Food insecurity
Late and violent rains	1 to 2 months behind the expected date of the first rains; delay that can go as far as June or even July	- Late sowing dates - Reduced germination rates - Lower yields - Disruption of agricultural activities - Destruction of infrastructure - Turns over crops	1 to 2 months behind the probable date of the first rains (delay that can go as far as June or even July)	- Late sowing dates - Reduced germination rates - Lower yields - Disruption of agricultural business	1 to 2 months behind the probable date of the first rains (delay that can go as far as June or even July)	- Late sowing dates - Reduced germination rates - Lower yields - Disruption of agricultural business

Climate risk	PDA1: Niger Valley		PDA2: Alibori Sud- Borgou Nord-2KP		PDA5: Zou-Couffo	
	Description	**Impacts**	**Description**	**Impacts**	**Description**	**Impacts**
Strong winds	Blow very often during the rainy period; periodic sandstorms	- Turns over crops - Destruction of infrastructure - Falling trees - Causes fires	Blow very often during the rainy period throughout the town, sometimes accompanied by whistling These types of wind occur 2 to 3 times a year	- Pour crops. - Destruction of infrastructure - Falling trees - Diversion of animals from their route - Causes fires	Dry season and end of rainy season; tornadoes	- Impacts on people, fauna, flora, land, habitat - Destruction of homes, forests and crops; - Lodging (?) of certain crops and windfalls in forests
Excessive heat	Rise in temperature compared to the ordinary throughout the municipality High heat during the dry season (heat wave)	- Drying out of crops - Drying up of watercourses - Low productivity of livestock and fishing - Negative impacts on humans	Rise in temperature compared to the ordinary throughout the municipality High heat throughout the dry season	- Drying up of crops and drying up of waterways - Weak livestock productivity - Negative impacts on humans	January - February	- Impacts on human and animal health; - Cashew and citrus plantations Falling water table and dehydration; - Decline in soil moisture and crop productivity; - Development of diseases (amoebiasis); - Burning of plantations and crops; - Decline in yield; - Producer debt

Among the impacts of the above on the forest ecosystems of Benin are the decline of gallery forests, physiological and ecological dysfunction of certain forest ecosystems, the loss of biodiversity, regression of the populations of characteristic ligneous species (*Dialium guineenses , Sclerocarya birrea , Afzelia africana, Diospyros mespiliformis , Daniellia oliveri*, etc.), the reduction in the size of fauna populations and modified population structures of certain plant and animal species.

Local stakeholder consultations in Benin and neighboring Togo (which has a very similar climate) during two parallel GEF PPG phases have also shown that local people in several areas have begun to observe an increase in rainfall intensity and resulting flood risks during the rainy season, while drought remains a major threat to agricultural livelihoods during the dry season. This is compounded by shifts in rainfall seasonality, higher temperatures and variability in rainfall amounts. This project will therefore prioritize interventions that increase the resilience of natural and agricultural ecosystems to a range of climate hazards, and that are identified in consultation with the local population. This will include an emphasis on the restoration of tree cover (including of useful species such as néré, karité (shea), baobab, as well as fuelwood species) especially on hill slopes and erosion-sensitive sites; the management of pasture areas and corridors (for seasonal migration) to conserve a sufficient vegetation cover and increase water infiltration, e.g. by reducing the use of fire; and the management of agricultural fields for increased water infiltration and storage, e.g. by maintaining soil cover, increasing soil organic matter content and improving soil structure through multiple cropping, the avoidance of fire and the strategic use of trees (agroforestry).

SOLUTIONS AND BASELINE ACTIVITIES

A variety of actions have been identified to cope with the above set of challenges. These solutions have emerged at community, regional, national and international levels and range from policies and plans—themselves embracing specific detailed approaches and solutions—to specific techniques developed by communities.

An important source in identifying actions and solutions was a series of consultations that took place in May 2021 between local stakeholders and the national team involved in the Project design. The consultations were part of the stakeholder engagement process that has ensured a participatory approach since the earliest stages of project design.

These solutions and specific baseline actions taken in support of their implementation, are reviewed below.

(i) National policies and strategies for addressing land degradation and climate change adaptation

Strategic Plan for the Development of the Agricultural Sector (PSDSA 2025)

A national agriculture development plan, titled the "Strategic Plan for Development of the Agricultural Sector", known as 'PSDSA 2025', was approved in May 2017. The plan's main objective is to encourage investment in agricultural productivity in order to 'produce more, produce better'. The Plan aims to provide not only for national food security, but to position Benin as a competitive producer within the region. Agricultural crop and value chain diversification is an important strategy identified in Benin's Nationally Determined Contribution[42] to help the country withstand projected climate impacts. Integrating consideration of climate risks into agricultural development and strengthening climate change adaptation for water resources, biodiversity and human settlements were identified as key actions in the National Action Plan for Adaptation (2008).

In order to implement the PSDSA, seven Agricultural Development Areas (*Pôles de dévéloppement agricole*) or PDAs, each with its own associated Territorial Agency for Agricultural Development (ATDA),[43] along with twelve Decentralised Departments for Agriculture, Livestock and Fisheries (DDAEP), have been established. Map 1 below presents the seven PDAs, while Table 3 identifies agricultural crops that have been prioritized for each area.

Map 1: The seven Agricultural Development Areas (*Pôles de dévéloppement agricole*)

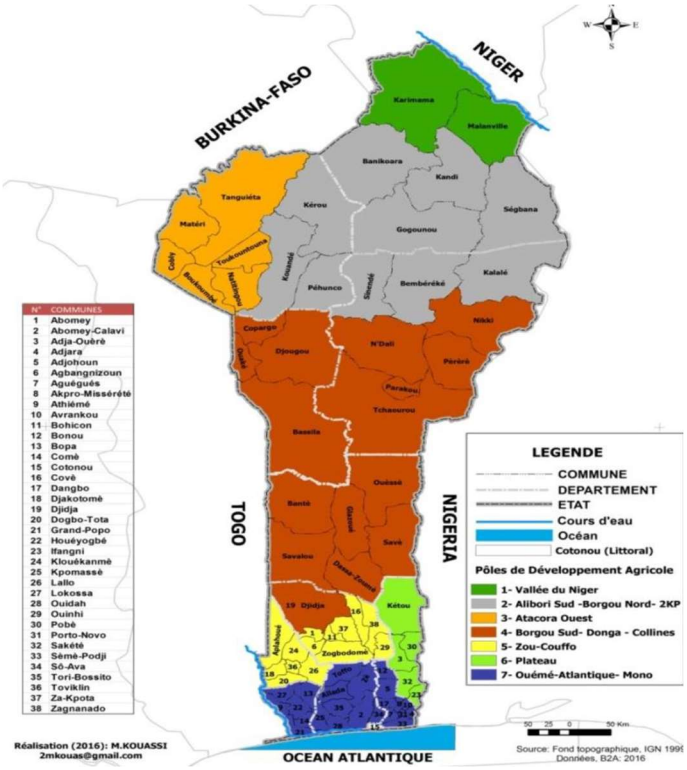


Table 4: Main crops in Benin's PDAs

[42] NDC, 2017

43 The creation, roles and responsibilities of the Territorial Agencies for Agricultural Development are governed by Decree No. 2017-101 of 27 February 2017.

PDA number and name	Main crops
PDA N˚1 « Vallée du Niger »	Rice and market gardening (tomato, onion, pepper, potato), cattle, sheep, goat and poultry farming
PDA N˚2 « Alibori-Sud, Borgou-Nord et 2KP	Cotton, maize and sorghum, intensive breeding of cattle, sheep, goats and poultry
PDA N˚3 « Atacora-Ouest »	Cotton and rice, maize, legumes (cowpeas and peanuts) and mango, intensive breeding of cattle, sheep, goats and poultry
PDA N˚4 « Borgou-Sud, Donga et Collines »	Cashew and cotton, maize, rice, roots and tubers (cassava and yam), legumes (cowpeas, soybeans and peanuts), and mango, intensive breeding of cattle, sheep, goats and poultry
PDA N˚5 « Zou et Couffo »	Citrus fruits, mangoes, oil palm. rice, Maize, cowpeas, peanuts (Agonlin oil) and small livestock
PDA N˚6 « Plateau»	Oil palm, maize, cassava and rice are also grown there
PDA N˚7 « Ouémé, Atlantique et Mono ».	Aquaculture, rice growing and market gardening, pineapple, maize, cassava and small livestock

Setting of Land Degradation Neutrality (LDN) targets

Benin has established national land degradation neutrality (LDN) targets and aims to achieve LDN by 2030.[44] This objective is to be achieved through a combination of restoration of 1.25 million hectares of degraded land and increased efforts to reduce and avoid degradation.

To achieve LDN by 2030, Benin has set the following targets:

i) Restore at least 50% (1.2 million ha) of degraded land;

ii) Limit the loss of non-degraded land to 5% (398,200 ha); and

iii) Attain 12% (1,364,603 ha) net improvement in vegetation cover[45].

The **measures** and efforts needed to attain the LDN targets include:

- reduce forest and savannah conversion from 21% to 5% (1,484,900 ha to 353,547 ha);
- increase forest cover by 5% (154,895 ha);
- increase agricultural land productivity on 2,431,400 ha; include LDN in national and local political priorities;
- reinforce political and institutional framework on management of forests;
- actively include local stakeholders and promote alternative livelihoods;
- promote climate-smart and resilient agriculture; develop fruit tree arboriculture; and
- restore degraded natural forests, degraded, bare and abandoned lands.

Nationally Determined Contribution (NDC) under UNFCCC

44 https://www.unccd.int/sites/default/files/inline-files/Benin_3.pdf

45 Benin Country Profile: Global Mechanism

Benin has also developed land-based mitigation plans as part of its Nationally Determined Contribution[46] (NDC) under UNFCCC. These include: a 5.7% reduction in emissions between 2021-2030 by reducing the annual rate of deforestation by 41.7%; a 20.6% reduction in methane emissions by 2030; strengthening reforestation and planting efforts through sustainable development of forests; promoting organic fertilisers for sustainable soil management; and promoting access to fuel-efficient stoves to reduce wood energy consumption. Climate risk informed ecosystem restoration and sustainable land management efforts implemented to help achieve land degradation neutrality will also support climate change adaptation by reducing soil erosion, regulating the microclimate, and improving water quality and quantity. Furthermore, sustainable land management and restoration interventions (including natural regeneration and agroforestry) will provide direct benefits through enhanced food production, diversified income sources and more resilient value chains.

Benin's NDC articulates the following priorities for adapting to, and strengthening resilience to, climate impacts across the agriculture and forestry sectors by 2030:

reduce the vulnerability of communities arising from degradation of forest ecosystems and land degradation;

ensure diversification and promotion of high value-added, climate-resilient, agricultural value chains, as well as modernizing and enhancing the resilience of farm infrastructure;

promote suitable systems of agricultural production that is resilient and adapted to climate change for food and nutritional security (climate-smart agriculture); and

define new agricultural calendars adapted to a changing climate and specific to each of the major agro-climatic zones.

In addition to the adaptation options articulated in the NDCs, adaptation strategies employed by farmers include mulching, diversifying crops grown, adopting crop rotation, abandoning certain crop types that require the application of high rates of pesticides and fertilizers, and adopting the use of faster growing varieties for crops like maize. Agroforestry with fruit trees is an important diversification strategy used by some farmers in building resilience to climate change.[47] Agroforestry also plays an important role in reducing and reversing land degradation, and is thus an important aspect of climate change adaptation in Benin's agricultural sector.

Other strategies

Benin has also adopted a series of strategic documents that include the 2008 National Adaptation Programme of Action and the 2016-2025 Low-Emission Climate-Resilient Development Strategy. In addition, the Government has recognised the threat posed by climate change in its 2016-2021 Government Action Plan (Plan d'Action Gouvernemental -

46 Benin's NDC. October 2017. https://www4.unfccc.int/sites/NDCStaging/Pages/Party.aspx?party=BEN

47 Fadina, R. and D. Barjolle. 2018. Farmers' adaptation strategies to climate change and their Implications in the Zou Department of South Benin. Environments. doi:10.3390/environments5010015

PAG), which outlines Benin's vision for sustainable economic and social development. The PAG integrates consideration of the SDG 2030 and the Paris Climate Agreement at its heart.

Benin's NDC is anchored in the SDGs in relation to the priority targets for national development and the Government Action Plan (PAG 2016-2023) specifies six areas of adaptation priority, including resilience in agricultural production and water resources. Adaptation objectives for the agricultural sector in the NDC include: i) ensuring diversification and promotion of high value-added agricultural value chains, as well as modernizing the resilient farm infrastructures in climate change context; ii) promoting suitable systems of agricultural production resilient and adapted to climate change for food and nutritional security, and; iii) defining new agricultural calendars adapted to a changing climate. Various implementation actions have been undertaken at the regulatory, institutional and political levels. These actions include the development of laws and normative measures, the definition of policies and strategies, the formalization of the institutional framework through the establishment of bodies and structures (political, technical and financial), etc. These include:

(i) establishment of the implementation committee of the Benin NDCs;

(ii) internalization of the document at regional, national, and local levels;

(iii) ongoing implementation of the Reporting and Verification Measures (MRV) system with support from GEF and FAO;

(iv) the ongoing evaluation of technology needs;

(v) the implementation of certain projects in various sectors of the country (agriculture, energy, water resources, coastal erosion);

(vi) the ongoing updating of the NDC document with the support of UNEP;

(vii) Benin's accession to the Nationally Determined Contributions (NDC) Partnership;

(viii) the passage of the Law on Climate Change; and

(ix) the transformation of the National Determined Contribution into a Climate Business Plan to better encourage investors.

A comprehensive process for developing the country's National Adaptation Plan (NAP) will likely yield the NAP in 2021. The NAP process is being supported by the joint UNDP/UN Environment's National Adaptation Plan Global Support Programme (NAP-GSP), GIZ, AfDB and the preparatory program to the Green Climate Fund (GCF). Achieving climate risk informed and resilient agricultural livelihoods will contribute to Benin's objective for SDG 1, 2, 3, 5, 8, 10, 13, and 15.

UNCCD 2030 Strategic Framework and the Sustainable Development Goals

The 2030 Agenda for Sustainable Development places heavy emphasis on an integrated approach to achieving SDGs that can harness synergies and minimize potential trade-offs. Land plays an important part in accelerating the achievement of many SDGs. Benin has prepared a road map that sets out a number of participatory and inclusive activities bringing together government agencies, municipal authorities, locally-elected officials, parliamentarians, civil society and the media, and members of the private sector to support achievement of the SDGs. Maintaining and restoring land resources in Benin will play a vital role in tackling climate change, securing biodiversity and maintaining crucial ecosystem services, while ensuring shared prosperity and well-being. Healthy and productive land can play an unparalleled role as an engine of economic growth and a source of livelihoods for billions worldwide, including the most vulnerable populations. Achieving climate risk informed and resilient land degradation neutrality (LDN) will help Benin to achieve multiple SDGs, including SDGs 1, 2, 3, 5, 6, 7, 8, 11, 12, 13 and 17.

(ii) Institutional developments

Creation of multi-sectoral forums

In order to support implementation of the PSDSA, a number of multi-sectoral forums, such as Producer Unions, Interprofessional Associations and Thematic Committees, have been created at national, district and local levels. These forums are designed to support implementation of the national agricultural reforms and provide guidance for improved agricultural production and human development.

Territorial Agency for Agricultural Development (ATDA)

The role of the Territorial Agency for Agricultural Development (ATDA)—which is under the Ministry of Agriculture, Livestock and Fisheries—is to facilitate improved coordination between value chains across the territories and to ensure that relevant tools and procedures are applied, particularly with regard to:

- the selection of priority sectors and value chains for each PDA;
- making inputs and strengthening the various links in promising value chains;
- strengthening relations between the different 'players' in the value chains;
- establishing strategic partnerships for targeted responses to problems faced by producers, processors, financial services, traders (in agricultural products and their derivatives), and consumers, and;
- promoting the development of hydro-agricultural and agricultural mechanization, as well as infrastructure, within the PDA.

Associations and extension services

In recent years, a number of civil society organizations have emerged which group together, and provide extension and other suport services to, the agricultural and related sectors. These represent an important element of the project's institutional baseline. They include:

- FUPRO-BENIN: Fédération des Unions de Producteurs du Bénin
- GEA-BENIN: Groupement des Exploitants Agricoles du Bénin
- ONPB: Organisation Nationale des Paysans du Bénin
- ANEP: Association Nationale des Eleveurs de Porcs
- UNAPEMAB: Union Nationale des Pêcheurs Marins et Assimilés du Bénin
- ANAB: Association Nationale des Aviculteurs du Bénin
- FNPPH: Fédération Nationale des Producteurs du Palmier à Huile
- ANOPER: Association Nationale des Organisations Professionnelles des Eleveurs de Ruminants
- SYNPA: Synergie Paysanne
- COLLEGE DES FEMMES des OP du Bénin
- FENAPAB: Fédération Nationale des Producteurs d'Anacarde du Bénin
- Conseil de Concertation des Riziculteurs du Bénin (CCR-B)
- Association nationale des professionnels transformateurs d'agrumes (AProTAB)
- Fédération nationale des organisations de maraîchers du Bénin

(iii) Projects

Building on the actions described above, a number of projects are in progress / planned to address the above-described development challenge. These projects, and their intersection with the present GEF project, are shown in **Table 5** below.

Table 5: Ongoing and planned baseline projects with which the GEF project will partner[48]

Project and Donor	Sector and location	Main anticipated results	Project period	Implementing Partner	Links to outputs …
Projet APADT-WAP (UE-UEM OA)	Transfrontier project (Benin, Burkina Faso, Niger) on Integration of adaptation and mitigation measures to climate change in management of the WAP[49] cross-border parks complex. The project aims to strengthen the resilience of ecosystems and improve the living conditions of populations in the WAP complex in the face of climate change through the establishment of a multi-risk early warning system relating to droughts, floods and fires, and the implementation of adaptation measures to manage these emergencies Project Site overlap: **Karimama, Gogounou,** and **Kouandé**	- Integration of climate change aspects and the emergency plan (MREWS) in the management of the WAP Complex - Design and implementation of a multi-risk early warning system (drought, floods and fires) - Improving ecosystem resilience and human livelihoods through implementation of adaptation actions - Awareness, communication and capacity building for concerted, integrated and sustainable management of the WAP Complex	2019-2023	Sahara et Sahel Observatory (OSS)	1.2; 1.3; 1.4; 1.5; 2.1; 2.2; 2.5.
Project to support the development of the cashew sector and agricultural entrepreneurship in Benin (PADEFA-ENA)[50] (FAD)	The Project aims to reduce poverty and improve food and nutrition security in Benin. It also aims to develop the cashew sector and to promote agroforestry No project site overlap but complementary activities and collaboration and sharing of lessons learned	- Reshaping of rural roads - Construction of warehouses - Rehabilitation of old plantations - Creation of modern orchards - Creation of processing units - Jobs for youth	2019-2024	MAEP/ATDA 4	2.1; 2.2; 2.3, 2.4; 2.5; 3.2; 3.3.; 3.4; 3.5.
Support program for the sustainable management of communal forests in Benin (Phase II) FFEM	Sustainable management of communal forests in Benin No project site overlap but there are parallel project objectives	- Promoting private communal forests - Sustainable supply of energy wood and charcoal - Promotion of alternative measures for sustainable management of classified forests	2018-2023	COFORMO	2.1; 2.2; 2.3, 2.4; 2.5; 3.2; 3.3.

[48] The present project has been developing partnerships with all of these projects, a portion of whose budgets are included in project cofinancing (see below, Partnerships).
[49] The WAP Complex (W-Arly-Pendjari Complex) is a transboundary Natural UNESCO World Heritage Site in Benin, Burkina Faso and Niger
[50] PADEFA-ENA - Programme d'Appui au Développement de la filière Anarcade et de l'Entrepreneuriat Agricole au Bénin

Project and Donor	Sector and location	Main anticipated results	Project period	Implementing Partner	Links to outputs …
Integrated Program for Development and Adaptation to Climate Change in the Niger Basin (PIDAC)[51] (BOAD[52]-BM)	The project aims to improve the resilience of Niger River ecosystems and populations through sustainable management of natural resources Project site overlap: **Karimama**	- Water resource management and construction of water reservoir - Restoration of African fan palm - Rehabilitation of two hydroelectric dams - Dam construction for the promotion of rice growing	2019-2024	DGEau/MEM[53] DQIFE[54]/MAEP	2.2; 2.4; 2.5; 3.2;
Project to improve the climate resilience of rural communities in central and northern Benin (Green Climate Fund)	Management of forest and agricultural landscapes No project site overlap but important for coordination and collaboration on mechanisms and activities of mutual value	The project aims to protect communities from the harmful effects of climate change through adapting agricultural livelihoods and productivity, and investing in land management Climate-resilient agricultural interventions will be implemented in seven central municipalities and in the north of Benin in the municipalities of: Dassa, Tchaourou, Djougou, Ouaké, Cobly, Boukoumbé and Banikoara	2022	DGEFC	2.2; 2.3, 2.4; 2.5; 3.2; 3.3.
Intensive Reforestation Project (BN)	The project aims to strengthen the country's forestry through intensive reforestation of land and forests in all of Benin's municipalities in order to make wood energy more available and to fight climate change Project site overlap: **Gogounou, Ségbana, Kouandé, Karimama, Covè, Za-Kpota, Kouékanmè** and **Aplahoué**	- Develop industrial plantations for the sustainable supply of wood needs - Strengthen the sustainability of urban, peri-urban and rural areas to the harmful effects of climate change - Support the dissemination of sustainable land management practices to improve the resilience of populations to the harmful effects of climate change	2017-2026	DGEFC	1.2; 1.3; 1.4; 1.5; 2.1; 2.2; 2.5.

[51] PIDAC : *Projet Integré de Développement et d'adaptation au Changement Climatique dans la Vallée du Niger*

[52] BOAD - *Banque Ouest Africaine de Développement*

[53] MEM : *Ministère de l'Eau et des Mines*

[54] DQIFE - *Direction de la Qualité de l'Innovation de la Formation Professionnelle et de l'Entrepreneuriat*

Project and Donor	Sector and location	Main anticipated results	Project period	Implementing Partner	Links to outputs …
		- Strengthen the institutional, technical and organizational capacities of the various actors			
Project to support the development of market gardens (PADMAR)	PADMAR will be limited to the southern regions of Benin and will intervene in 7 of the 12 departments of the country, namely Atlantic, Couffo, Littoral, Mono, Ouémé, Plateau and Zou. In these departments, the Project will intervene in 27 communes out of a total of 44 communes Project site overlap: **Za-Kpota, Covè**	Focused on the development of market gardens.	2017-2023	FIDA	2.2; 2.3, 2.4; 2.5; 3.2; 3.3.
Pro-Agri3: Programme de Promotion de l'Agriculture (ProAgri)	Atacora : Tanguiéta, Kérou, **Kouandé,** Péhunco Donga : Boukoumbé, Copargo, Djougou, Ouaké Borgou : Nikki, N'Dali, Pèrèrè, Tchaourou Collines : Ouèssè, Glazoué, Savè, Dassa-Zoumè	Focused on agricultural support for cashewnut, rice, soybean and shea butter value chains.	2017 - 2020	BMZ/GIZ	2.1; 2.2; 2.3, 2.4; 2.5; 3.2; 3.3.; 3.4; 3.5.
Integrated Program for Development and Adaptation to Climate Change in the Niger Basin (Pidacc-Bn) Benin Component	Resilience To Climate Change Banikoara, Bembereke, Gogounou, Kalale, Kandi, **Karimama**, Kerou, Kouande, **Malanville**, Nikki, Pehunco, Segbana, Sinende	Sustainable agriculture lowland development restoration of degraded lands reforestation	2019-2025	FAD DCF UE BENIN	2.2; 2.3, 2.4; 2.5; 3.2; 3.4; 3.5.
ALDIPE -ONG	PDA 5 Zakpota, Covè	Sustainable agriculture, lowland development, restoration of degraded lands, reforestation	permanent	UE ; GIZ ; BM	2.1; 2.2; 2.4; 3.1; 3.2; 3.3; 3.4; 4.2; 4.3; 4.4.
CAPES	Aplahoué, Klouékammè	Sustainable agriculture, lowland development, restoration of degraded lands, reforestation	permanent	CRDI ; IITA/AFRICA RICE	2.1; 2.2; 2.4; 3.1; 3.2; 3.3; 3.4; 4.2; 4.3; 4.4.

Project and Donor	Sector and location	Main anticipated results	Project period	Implementing Partner	Links to outputs …
API Service Monde	Kouandé, Ségbana, Gogounou	Sustainable agriculture, lowland development, restoration of degraded lands, reforestation	permanent	UE, AFD	2.1; 2.2; 2.4; 3.1; 3.2; 3.3; 3.4; 4.2; 4.3; 4.4.
DEDRAS	Karimama Ségbana, Gogounou	Sustainable agriculture, lowland development, restoration of degraded lands, reforestation	permanent	GIZ, WOORD DAAD Pays-Bas	2.1; 2.2; 2.4; 3.1; 3.2; 3.3; 3.4; 4.2; 4.3; 4.4.
APIC	Karimama Ségbana, Gogounou	Sustainable agriculture, lowland development, restoration of degraded lands, reforestation	permanent	BAD ; GIZ ; IFAD	2.1; 2.2; 2.4; 3.1; 3.2; 3.3; 3.4; 4.2; 4.3; 4.4.

BARRIERS

In spite of the above baseline efforts, a number of barriers are continuing to limit success in achieving solutions to the inter-connected challenges of land degradation and climate change adaptation in the agriculture and land management sectors. These have been grouped into four areas and are outlined below.

Barrier type 1: Political, financial, institutional and regulatory barriers to operationalizing Land Degradation Neutrality and climate change adaptation

Specific barriers include:

- Limited data management and analysis capacities related to LDN, climate risk and vulnerability assessments for specific crops, livestock and sub-regions, for adaptation planning and other management purposes;
- Policy and institutional barriers; Although land degradation and climate change vulnerability are recognized and are receiving political attention at highest government levels in Benin, including through the creation of an inter-ministerial committee on climate change, a key policy and institutional barrier remains the limited ability of developing, budgeting for and implementing integrated activities and work plans in the areas of land degradation and climate change. The discrepancy between policy goals and plans on the one hand, and the lack of actual implementation on the ground is recognized by the Government of Benin. It is in part caused by the difficulty of allocating operational budgets for inter-institutional and inter-ministerial tasks and also to gaps in capacities and responsibilities for inter-disciplinary tasks especially at local level. The result is that often plans (on LDN, CCA and their integration with agricultural policies) remain on paper and have limited impact on the ground.
- Limited institutional and human capacities for: (i) agricultural and agro-forestry extension and monitoring, or for inter-ministerial coordination and (ii) implementation of national and international policies, plans and commitments, e.g., PSDSA, LDN targets, CCA, NDC, etc

Barrier type 2: Site-level barriers to land and forest conservation & restoration under climate change

Specific barriers include:

- Overlapping, contradictory and non-strategic land use objectives and plans
- Few well managed, well studied examples of integrated management and restoration as part of ecosystem-based approaches to adaptation incorporating direct and indirect climate change risks into spatial planning and prioritization.
- Lack of inter-sectoral coordination at landscape level, e.g. to align agricultural development plans with forest protection objectives integrating a range of relevant climate change scenarios

- Limited human skills and capacities for taking action in support of CCA and LDN, e.g. by adopting innovative practices, stimulating uptake and accessing new markets

Barrier type 3 - Barriers to sustainable, nature-based livelihoods

Specific barriers include:

- Limited understanding of how various agricultural value chains could be transformed to be climate resilient, support LDN, conservation and sustainable income generation
- Limited knowledge of climate resilient agriculture value chains
- Income-generating support programs are failing to capitalize on partnership opportunities
- Climate-resilient, zero-degradation products lack adequate marketing opportunities

Barrier type 4 - Barriers to gender equality and diffusion of innovations and knowledge

Specific barriers include:

- Women face multiple barriers and challenges to their effective participation and benefitting from sustainable and climate resilient development efforts. During stakeholder consultations women expressed concerns about their lack of participation in decision-making processes. The Gender Analysis conducted during PPG identified the following key challenges, as disparities in terms of gender:
    - Participation of women in **decision-making bodies** at national and local levels is very low.
    - The influence of women in decision-making remains limited and female **participation in political life** is declining. For example, the proportion of women in the National Assembly from the fifth to the eighth term is around 7.62 percent, or six women in the fifth, six women in the seventh and seven women in the eighth.
    - Access to land remains out of reach for the majority of women in Benin. The phenomenon is particularly notable in rural areas, where gender equality is still far from being achieved and women-headed households are more vulnerable to climate change impacts.
    - Women's **lack of access to quality public primary and secondary education** hinders abilities to understood, assimilated and adopt changes needed to adapt to climate change.
    - Limited economic resources, social benefits and political power of women diminish their **ability to react in risk situations**. Other aggravating circumstances include the poor dissemination of emergency information among women and the fact that many women and girls cannot read or write (UNDP, 2009).

- Lessons of LDN & CC adaptation interventions & innovations are inadequately captured, learned and diffused within and beyond target landscapes

III. STRATEGY

In addressing drivers of land degradation, the project will take a systemic approach to build climate resilience in vulnerable agricultural and degraded forest-mosaic landscapes, thereby mainstreaming climate adaptation needs and options in Benin. The project proposes actions that acknowledge the intrinsic links between reversing land degradation, supporting climate change adaptation for vulnerable communities, and reducing further pressures on existing natural ecosystems. It will support Benin in achieving its landscape restoration targets in a manner that integrates climate change risks in identifying and selecting types of restoration interventions, and climate resilience as an objective, as well as integrate systematic adaptation planning and action within agricultural communities and institutions. The project will specifically work with smallholders and local communities who depend on farming and small-scale cattle herding for their livelihoods to restore agro-ecosystems, adopt climate resilient agricultural practices and diversify value chains in the productive landscape. The project's approach will address barriers and their underlying root causes, which are currently hindering effective integrated landscape management, addressing the physical, climatic, biological and socio-economic aspects affecting the agro-ecosystems and forestry management.

As noted above, Benin has joined the land degradation neutrality (LDN) process and has committed to achieving the goal of zero net land loss by 2030 in order to preserve terrestrial and aquatic ecosystems. Benin's NDC clearly indicates its awareness of, and commitment to, addressing the needs for adapting the agricultural sector to climate change impacts. Furthermore, climate change adaptation and reversing land degradation are interconnected, with many climate-resilient agricultural practices contributing to improving soil fertility, reducing soil erosion and restoring ecosystem services through restoration and regeneration of ecosystems.

The present project has been designed as an integrated LDN and climate change adaptation project that aims to reverse current trends in land and ecosystem degradation in Benin, build adaptive capacity to enhance climate change resilience of communities, and implement land restoration, and improved livelihoods for communities in the target areas.

As noted above, the Government of Benin carried out a number of reforms to implement the PSDSA, in particular the creation of seven Agricultural Development Areas (PDAs), each with its own Territorial Agricultural Development Agency (ATDA),[55] deployed across 12 Decentralised Departments for Agriculture, Livestock and Fisheries (DDAEP)[56]. The principal

55 Roles and responsibilities for the ATDAs were defined in Decree No. 2017-101 (27 February 2017) and Decree No. 2017- 582 (13 December 2017)

56 The creation and roles and responsibilities of the DDAEP are noted in Order No 2016-681 of 07 November 2016

project partners will be the ATDA structures at the target sites. The project will assist these Agencies—along with selected multi-sectoral, multi-party forums that have been created at national, district and local levels—to implement the reforms that are underway. The project will further provide technical guidance for improved climate resilient agricultural production and sustainable human development that is aligned with Benin's LDN targets.

The project will focus on three of the country's seven PDAs. Profiles of these PDAs are presented in **Annex 14.**

In addition to building capacity at PDA level, the project has identified eight target communes, together covering approximately 22,400 km^2, where on-the ground restoration and prevention actions will take place. **Table 6** below provides basic information on the selected districts, including data on net degradation and deforestation between 2005 and 2015.

Table 6: Basic data on project target districts, land degradation and deforestation

PDA	Department	Commune	Area (km^2)	Population (2013)	Annual pop. growth, 2002-2013 (%)	Net degradation (ha)(2005-2015)	Net deforestation (ha) (2005-2015)
1	Alibori	Karimama	6,041	66,675	4.72%	208	276
2	Atacora	Kouandé	4,500	111,540	2.99%	3,545	898
	Alibori	Ségbana	4,700	89,081	4.79%	4,205	20,378
	Alibori	Gogounou	4,910	117,523	3.48%	3,804	689
5	Coffou	Klouékanmé	394	128,597	2.87%	61	258
	Coffou	Aplahoué	915	171,109	3.37%	17	4,211
	Zou	Cové	525	51,247	3.40%	15	4,687
	Zou	Zakpota	409	132,818	3.78%	12	517

Sources: Deforestation and degradation calculations by project team

Pilot activities within the above communes will demonstrate climate-resilient agricultural development, restoration techniques, income diversification strategies, etc. Restoration and other efforts will include community farmers as well as private forest concessions and plantations (such as teak, eucalyptus and acacia tree species). In addition, the project sites include, or are in close proximity to, classified, community, and sacred forests, as well as protected areas. For example, in the Niger Valley, Karimama,[57] is in close proximity to the

57 Karimama is a town, commune and arrondissement in Alibori Department and covers 6,102 sq kilometres (610,200 ha). It is located in the north-east of Benin at 12o4'N; 3o11'E

Parc W, whilst Kouandé[58] is close to Pendjari National Park; Gogounou[59] and Ségbana[60] (both in PDA 2, i.e. Alibori Sud-Borgou Nord-2KP), and Aplahoué (Zou-Couffo, PDA 5) include sacred forests. The commune of Aplahoué[61] is associated with a group of sacred forests within Agoua Classified Forest (Terminal Evaluation Report of UNDP SGP project, GEF Project ID 3770).[62] These areas are large and cover an area exceeding 1.2 million hectares. The project's active measures to encourage learning, diffusion, uptake and replication will help to ensure that adoption of improved practices will extend well beyond the 30,000 hectares noted in the project's core indicators.

Alignment with GEF focal area and/or Impact Program strategies

The project aligns with two GEFTF funding areas under Land Degradation, namely LD-1.3: Food systems, land use and restoration and LD-2.5: Creating an enabling environment to support voluntary LDN target implementation.

With respect to climate change adaptation, the project responds to two of the three LDCF programming objectives. In addition to supporting "CCA-1: Reduce vulnerability and increase resilience through innovation and technology transfer for climate change adaptation," it is also providing significant support related to "CCA-2: "Mainstream climate change adaptation and resilience for systemic impact." This is particularly evident in light of the project's Joint Programming approach, in which GEFTF funds and objectives for land degradation are being combined in a single project with LDCF funds and programming objectives.

The project's multi-focal area alignment is perhaps best described in the LDCF Programming Strategy document, under LDCF Objective 2: 'Mainstream Climate Change Adaptation and Resilience for Systemic Impact,' which states:

> Under this objective, countries may strategically **jointly program** LDCF grants alongside GEF Trust Fund resources to develop robust projects or programs that generate GEBs as well as adaptation benefits. Such support will capitalize on the GEF's unique mandate to serve multiple MEAs, draw upon its wide-ranging technical strengths, and respond to recent COP guidance to promote synergies across focal areas. This approach towards synergistic programming of adaptation and GEF Trust Fund resources can deliver multiple benefits in terms of sustainability, cost-effectiveness, delivery of holistic solutions, enhanced impacts, and an expanded array of beneficiaries.
>
> Alignment of joint programming will depend on national adaptation priorities as well as priorities for generating GEBs, and will be country-driven…given the high level of alignment of LDC NAPA

58 Kouandé is a town, commune and arrondissement in Alibori Department with an area of 4,500 sq kilometers (450,000 ha). It is in the north-west of Benin at 10o19'54"N; 1o41'29"E

59 Gogounou is a town, commune and arrondissement in Alibori Department with an area of 4,910 sq kilometers (491,000 ha). It is in the north-east of Benin at 10o50'19"N; 2o50'10"E

60 Ségbana is a town, arrondissement and commune located in Alibori Department with an area of 4,471 sq kilometers (447,100 ha). It is in the north-east of Benin at 10°55'40"N 3°41'40"E

61 Aplahoué is a commune and a city in Couffo Department (it is the Capital of Couffo) and has an area of 572 sq kilometers (57,200 ha). It is in the south-west of Benin at 6°56'N 1°41'E

62 See Terminal Evaluation of GEF-funded UNDP SGP: Intégration des Forêts Sacrées dans le système des Aires Protégées du Bénin - PIFSAP

implementation projects to date in themes/areas of agriculture, land-based actions, sustainable rural livelihoods… [63]

The LDCF Programming Directions go on to describe the potential for integrated benefits, two of which are well captured in the present project. These are:

> Climate-resilient smallholder food systems that generate climate mitigation, sustainable land management and biodiversity benefits while addressing the root causes of degradation and vulnerability;
>
> Land-based solutions, such as the Green Wall Initiative, that address cross-cutting themes of adaptation, mitigation, land degradation, and sustainable development...

In recognition of the importance and relative novelty of this Joint Programming approach, careful attention has been paid to ensuring full integration and benefits associated with the mainstreaming approach. Special attention has been paid to ensuring alignment with LDCF guidance, details of which are presented in **Table 7** below.

Table 7: Project alignment with LDCF objectives and outputs

LDCF Objective & outcome	**LDCF Output (as per CCA results framework)**	**Corresponding project outputs or activities**
OBJECTIVE 1: Reduce vulnerability and increase resilience through innovation and technology transfer for climate change adaptation *Outcome 1.1: Technologies and innovative solutions piloted or deployed to reduce climate-related risks and/or enhance resilience*	Output 1.1.1: Physical and natural assets made more resilient to climate variability and change	Output 2.2*:* Degraded lands amounting to at least 15,000 hectares, and at least 15,000 hectares of forest are under climate risk informed and resilient restoration and functional and sustainable management regimes
	Output 1.1.2: Livelihoods and sources of income of vulnerable populations diversified and strengthened	Output 3.1: Five agricultural value chains are identified and assessed according to their potential to be climate resilient and deliver multiple local, national and global benefits, including income generation, LDN benefit and enhanced adaptive capacity within project PDAs
		Output 3.2: Selected climate resilient and sustainable agricultural and agroforestry practices and market channels are strengthened through investments and extension support for climate resilient agricultural practices, leading to triple-bottom-line benefits, strengthened adaptive capacity of vulnerable communities, job and SMME creation

[63] LDCF-CCA Result Framework.

LDCF Objective & outcome	LDCF Output (as per CCA results framework)	Corresponding project outputs or activities
		Output 3.3: Local, national and regional partnerships established to support and promote 'forest-friendly' and climate resilient income-generating opportunities
	Output 1.1.3: New /improved climate information systems deployed to reduce vulnerability to climatic hazards/variability	Output 1.1: National LDN and restoration database established within the DGEC under MCVDD, bringing together national data sources including related data on climate impacts, vulnerability, and adaptation needs, and linking to global systems for monitoring restoration and LDN
	Output 1.1.4: Vulnerable natural ecosystems strengthened in response to climate change impacts	Output 2.5: Green Belt infrastructure against the advance of the desert in the north of Benin strengthened through development of manuals for climate change resilient restoration and forest regeneration, community managed nurseries for drought resilient tree species of local preference, communal fire control measures, protection of watercourses, integration of tree fodder production to accommodate seasonal passage of pastoralists, and locally managed monitoring for landscape and forest restoration.
OBJECTIVE 2: Mainstream climate change adaptation and resilience for systemic impact *Outcome 2.1: Strengthened cross-sectoral mechanisms to mainstream climate adaptation and resilience*	Output 2.1.1: Cross-sectoral policies and plans incorporate adaptation considerations	Output 2.1: Integrated climate risk, land use, landscape restoration, and forest management plans, which incorporate climate scenario-based hazards and likely impacts, are developed, with climate change scenarios informing risks and selection of adaptation options, and developed and operationalised at target sites, with capacity to implement
	Output 2.1.2: Cross-sectoral institutional partnerships established or expanded	Output 3.4: Strengthened cooperatives and farmer organizations and negotiated partnerships with traders and processors for farmers and communities practicing climate resilient, zero degradation agriculture and agroforestry
	Output 2.1.3: Systems and frameworks established for continuous monitoring, reporting and review of adaptation	Output 1.2: National monitoring and reporting systems for tracking climate change vulnerability in the agricultural sector along with changes in adaptive capacity, land cover, land degradation, restoration, forest ecosystems and ecosystem services
	Output 2.1.4: Climate risk and vulnerability assessments conducted	Output 2.1: Integrated climate risk, land use, landscape restoration, and forest management plans are developed, with climate change scenarios

LDCF Objective & outcome	LDCF Output (as per CCA results framework)	Corresponding project outputs or activities
		informing risks and selection of adaptation options, and operationalised at target sites Output 4.2: Participatory M&E and quantification of LDN implementation—including restoration, SFM and SLM actions—as a contribution to national reporting under the UNFCC and other international commitments
Outcome 2.3: Institutional and human capacities strengthened to identify and implement adaptation measures	Output 2.3.1: Number of people trained regarding climate change impacts and appropriate adaptation responses	Output 2.3: Awareness raising and training of 1,000 national and local government and administration officials (including ATDAs, DGEC under MCVDD and DGEFC1), parliamentarians and representatives of private sector in climate resilient and degradation neutral planning and policies, with focus on agriculture, animal husbandry and forestry,1 targeting the mainstreaming of CCA and LDN in all policies and administrative decisions
		Output 2.4: Extension services in climate resilient and degradation neutral agriculture, animal husbandry and agroforestry provided to 24,000 farmers and community leaders (50% women), including on climate resilient and degradation neutral cotton production.

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

Table 8 below summarizes the project's incremental cost reasoning.

Table 8: Incremental cost reasoning

Baseline practices	Alternatives to be put in place	Global Environmental Benefits (GEBs) and Project impacts
National plans and programs are in place but lack of coordination and defined responsibilities between government actors hinders effective implementation of the LDN priorities/targets and SLM Framework which in turn affects agriculture and agroforestry (impacted by lack of appropriate SLM of the	Cross-sectoral Ministerial or Agency regulations (Decrees/Orders/Bills) for the LDN targets and the climate risk integrated SLM and SFM Framework will be developed where lacking, necessary, and appropriate, and signed into effect, ensuring effective coordination between the different sector entities within government, integration and mainstreaming of climate adaptation needs in efforts to achieve land degradation neutrality, as well as providing needed direction for effective implementation towards meeting underlying targets. New	Climate risk informed and resilient SFM, SLM and sustainable agricultural production approaches are adopted and implemented on **30,000 ha in three PDAs**, as follows: - 15,000 ha of forest ecosystem brought under restoration integrating consideration of climate change scenarios/risks and resilience criteria (e.g. using seed varieties and/or species resilient to current and future

Baseline practices	Alternatives to be put in place	Global Environmental Benefits (GEBs) and Project impacts
crop and forest lands at target sites). National funding through the government systems will continue to be available, but this does not meet the funding gap at local level where funding for additional, climate risk informed SLM, restoration, and forest conservation efforts are needed. Smallholder farmers will continue focusing on traditional cash-crops and remain unaware and untrained on alternative, climate resilient value chains, agricultural practices and SLM, agroforestry possibilities that are financially viable. The economic returns from traditional farming systems and local varieties/traditional crops will continue to decline in the local farming communities.	or revised policies will in turn influence how forestry and other land management and land-use plans in target areas will be coordinated and implemented. Guidelines on how to access the LDN Fund and other funding sources will be elaborated, to enable project development in support of climate resilient and risk informed SLM and forest conservation at local level. The training in land degradation and neutrality target achievements through development of management tools and climate change risk integrated, land-use options will build the technical expertise of agencies, project staff, and producers in management of landscapes in the target areas. Specific vulnerability of smallholder farmers and small-scale cattle herders will be assessed through the use of tools such as SHARP. [64] Together with analysis of climate resilient value chains [65] and adaptation options, these assessments will provide a comprehensive understanding of varying vulnerability to climate change, existing adaptive capacity, and farmer preferences for adopting more climate resilient value chains and climate resilient agricultural practices. Training in effective climate resilient agriculture, SLM and sustainable, climate risk informed and resilient agroforestry will enable farmers to implement methods that will increase land productivity, including increasing soil fertility, identify climate resilient value chains for diversifying income and livelihood sources, improve ability for on-farm water savings and micro-irrigation to increase water efficiency in order to face droughts, variability in rainfall	climate change) restored and under improved management (Core Indicator 3 - Area of **land restored;** CCA Core Indicator 2 – area **of land managed for climate resilience**) - 15,000 ha of degraded land brought under restoration and under improved management (Core Indicator 4 and CCA Core Indicator 2 - Area of **landscapes under improved practices** [excluding protected areas]) - The co-benefits of the project in terms of GHG emissions avoided have been estimated to be **4,471,732 t CO2eq**. - 24,000 producers in 18 communities are provided with training and extension support for climate resilient, sustainable (climate-smart) agricultural and agroforestry production. (CCA core indicator 1 – total number of direct beneficiaries, with indirect beneficiaries estimated at an additional 344,000 individuals in the three development poles) The capacity for developing climate risk informed and resilient forest and agricultural landscape and land-use plans is built through the provision of training and extension services to national DGEC under MCVDD and MAEP staff, national agency staff involved in land use, land management, climate change adaptation and forest conservation at the targeted project sites

64 Self evaluation and holistic assessment of climate resilience of farmers and pastoralists (SHARP). Accessed at : http://knowledgecentre.resilientfoodsystems.co/kc/resource_library

[65] Toolkit for value chain analysis and market development integrating climate change resilience and gender responsiveness: https://www.fao.org/publications/card/en/c/CB0699EN/

Baseline practices	Alternatives to be put in place	Global Environmental Benefits (GEBs) and Project impacts
	and extremes, protecting local biodiversity, and carbon sequestration. A designated knowledge and learning exchange system will facilitate sharing of knowledge and information on improved, climate resilient SLM practices between project implementors and all stakeholders.	Investment for SLM, climate resilient agriculture and climate resilient value chains and sustainable agroforestry projects will increase as a result of the strengthened mechanism for funding through the National Forestry and National Agricultural Development Funds (this will be designed to provide compensation to farmers adopting climate resilient SLM technologies that lead to long term productivity, use of high-value sustainably grown, climate resilient and forest-friendly crops, and improved land and soil health as a result of reduced dependence on chemicals and fertilizers)

Global environmental benefits (GEFTF) and adaptation benefits (LDCF/SCCF)

The environmental benefits generated by the adoption of climate resilient agricultural practices, climate risk informed and resilient SLM and SFM under the project will contribute to land and ecosystem health, strengthen climate resilience of beneficiaries, and support community adaptation to the impacts of climate change. Through project activities, climate resilient value chains will be identified and promoted, agricultural practices and production at target sites will improve, integrating climate risk reduction strategies, with associated increases in revenue, and ecosystem integrity will be conserved. The project will carry out activities that will ensure reduced threats from unsustainable land and forest use practices, and, at the same time, limit land degradation and soil erosion, contributing to increased ecosystem services, build resilience in hydrological flows under climate change and strengthening adaptive capacity of the households in target sites. Through the project, Sustainable Land Management, and climate resilient agricultural practices will be applied as an effective tool to limit soil and vegetation degradation and enhance water resource management. The project will additionally improve resilience to climate change through implementation of climate change risk informed Sustainable Forest Management practices that will conserve natural resources and reduce their unsustainable exploitation. Initiating and mainstreaming climate-smart agroforestry and carrying out training and agricultural extension services at ground level, including on adapting to climate change, will contribute to the uptake of SLM approaches and techniques that will increase community resilience to climatic hazards, restore degraded ecosystems, and increase agricultural supplies for subsistence and income generating purposes.

The project will **reduce vulnerability and increase resilience** through innovation and technology transfer for climate change adaptation. This will occur through transfer of

technologies and innovative solutions that will be piloted or deployed to reduce climate-related risks and/or enhance resilience. More specifically:

- Technologies and innovative solutions will be piloted or deployed to reduce climate-related risks and/or enhance resilience, affecting production practices on 15,000 of agricultural land;
- Livelihoods and sources of income of vulnerable populations (est. 24,000 beneficiaries) will be diversified and strengthened in the areas of agriculture, agro-processing, dairy and enhanced access to markets, through the strengthening of climate resilient value chains;
- Improved climate information systems will reduce vulnerability to climatic hazards/variability, through improved collection and dissemination of climate-related information, benefitting an estimated 5,000;
- Vulnerable natural ecosystems, including grasslands and forests, will be strengthened in response to climate change impacts, resulting in hydrological flows and enhanced provisioning services due to reduced conversion of natural forests and savannahs into other forms of land use, as well as through increased reforestation.

In addition to the above, **climate change adaptation and resilience will be mainstreamed** for systemic impacts, including through:

Strengthened cross-sectoral mechanisms (one each for three PDAs), covering the agricultural and water sectors, will mainstream climate adaptation and resilience, while enhancing inter-sectoral coordination of policies and planning, and water resource management;

Institutional and human capacities (est. 1,000 trainees) to identify and implement adaptation measures will be strengthened;

Local people will be made aware of climate change impacts and appropriate adaptation responses.

Quantitative indicators of global environmental benefits and adaptation benefits are listed in the last column of **Table 7** above. The following provides additional information on how these targets were determined:

- **Forest restoration targets:** Based on the forest map of Benin and the degradation areas around protected forests (sacred, community, classified and wildlife reserves), the national SFM indicator has been defined. The NDC has set itself the ambitious target of restoring 150,000 hectares of degraded forests. The project has committed to contributing 10% of the CDN's target and has initiated a process of identifying the most suitable sites in the project's intervention area, based on the prevalence of degraded forest in the zone.

- **Target of land under sustainable management:** We have estimated the proportion of degraded arable land in the project's sites from land use maps, and have applied the land degradation neutrality indicator which is “10% of degraded land restored” according to the National SLM Action Plan (PAN/GDT). This resulted in a target of 15,000 ha of land to be brought under climate risk informed sustainable management.
- **Calculation of carbon gains:** The co-benefits of the project in terms of GHG emissions avoided have been estimated to be **4,471,732 t CO2eq**. Of these, 2,887,338 t CO2eq of emissions reductions would result from the restoration of 15,000 ha of degraded areas into natural forest cover, focusing on sensitive areas such as slopes, riparian forests and wildlife corridors; and the remainder would result from the rehabilitation of 15,000 ha of degraded areas into a mix of agroforestry, productive crop and pasture land with interspersed tree cover. The details are provided in the included Ex-Act file. The difference to GHG emissions reductions estimated at PIF stage (1,006,450 t CO2eq) are due to a change in the methodology of calculation (for the PIF, the Winrock carbon calculator was used) and related assumptions (especially consideration of a 20-year time horizon in the Ex-Act tool as compared to a 6-year horizon in the Winrock tool) as well as minor adjustments in project design (i.e. the current design assumes that 15,000 ha of degraded lands would be rehabilitated into a mix of agroforestry, productive pasture and crop lands with interspersed trees rather than all into agroforestry as was the assumption in the PIF calculation).
- **Number of beneficiaries:** The project aims to directly benefit a total of 24,000 individuals, of which 7,000 adult men, 7,000 adult women and 10,000 youth, with indirect beneficiaries estimated at an additional 344,000 individuals in the three development poles. Estimations of population size are based on village populations and the proportion of active farmers in each village. At least 50% of direct beneficiaries, and approximately 50% of indirect beneficiaries, will be women.

Safeguards

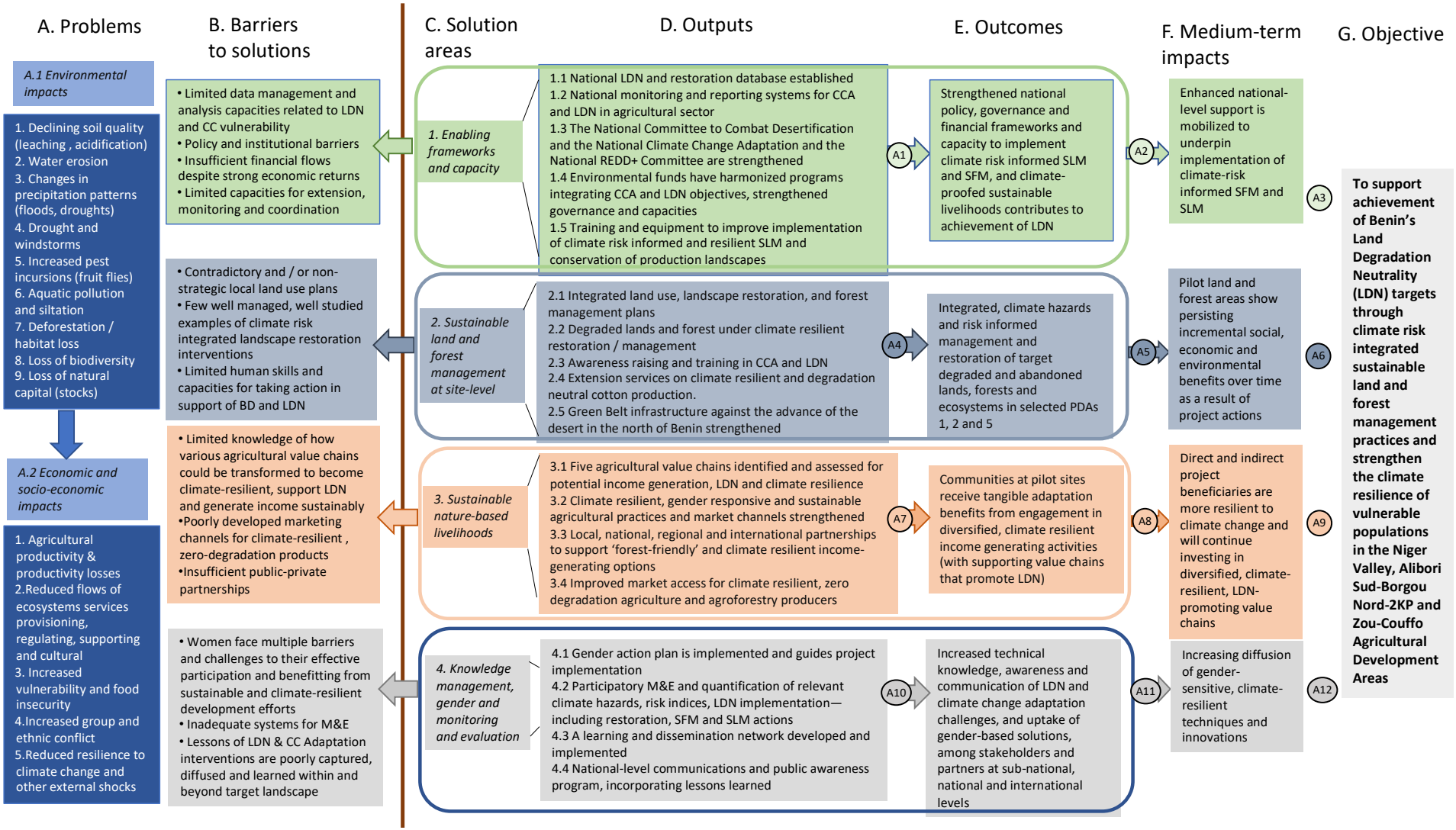
UNDP’s safeguards approach is an integral part of the project strategy and ensures that the project has been designed and will be implemented in compliance with UNDP social and environmental safeguards. In particular, UNDP’s Environmental and Social Management Framework (ESMF) (see **Annex 9**) will be followed to ensure that environmental and social risks and impacts are fully assessed and management measures are in place prior to and during the implementation of relevant project activities. The ESMF forms the basis on which the project will develop an Environmental and Social Management Plan (ESMP) for each PDA to ensure that significant adverse environmental and social impacts mitigation and management measures are implemented and monitored as required. The ESMF identifies the steps required for preparing a detailed assessment of the project’s potential social and environmental risks, and for preparing and approving the required management plan for avoiding, and where avoidance is not possible reducing, mitigating and managing, the identified adverse impacts of this project.

Theory of change

Figure 1 below presents the project's theory of change, which may be summarized as follows:

- The project's theory of change incorporates a brief summary of problems and barriers (Columns A and B respectively), which is essential to understanding the intervention logic.
- An interlinked set of environmental problems faces Benin as a whole and the target PDAs) in particular (see ToC diagram, A.1), constituting a loss of natural capital. These problems are due to a set of *direct and proximate causes*, which themselves are resulting from *root / underlying causes* (neither shown in diagram; see discussion in UNDP project document).
- The above environmental problems are having a set of environmental and socio-economic impacts on local populations (see ToC diagram, A.2), associate with reduced flows of various environmental services.

Figure 1: Theory of change



Theory of change assumptions A1 - A12

A1: Policy and institutional tools and plans are effectively integrated to result in improved climate sensitive and risk informed landscape planning and decision-making for climate adaptation and LDN
A2: Climate resilient and degradation neutral landscape planning and decision-making methodologies are effectively absorbed into government at various levels and implemented beyond the duration of the project
A3: Climate resilient and degradation neutral landscape planning and governance remain mainstreamed into government practice over the long term in the target provinces
A4: The restoration of agricultural and forest ecosystems with appropriate methods, informed by climate risk assessments, and in strategic locations are integrated into management decisions and result in improved resilience of ecosystems in the target areas
A5: Sensibly improved ecosystem services delivery result in larger-scale adoption of ecosystem restoration across the region beyond the lifetime of the project
A6: Enhanced ecosystem integrity and LDN contribute to persistent and large-scale climate-resilient sustainable development in the target provinces
A7: Degradation-neutral and climate-resilient value chains and land use practices are successfully adopted by a significant percentage of the local population
A8: The adoption of nature-based and climate-resilient value chains and land use practices results is perceived as beneficial and maintained beyond the project end by local communities and businesses
A9: Degradation-neutral and climate-resilient value chains and land use practices are sufficiently profitable to be adopted at significant scale and mainstreamed into the local economies in the target provinces
A10: Learning, knowledge-sharing and gender sensitive approaches are effectively mainstreamed throughout the project
A11: Knowledge-sharing and gender sensitive development are adopted at a large scale and mainstreamed into government and non-government organizations across the region
A12: A learning and knowledge-sharing culture and gender mainstreaming contribute to long-term, degradation-neutral and climate-resilient sustainable development in the region

- A project intervention designed to address this situation requires four interlinked solution areas, a.k.a. components. These are summarized in column C and represent the anchors for four solution pathways that together will deliver the project objective. These solution areas work synergistically to address environmental and socio-economic impacts in highly complex ways which cannot be captured in the simplified ToC diagram
- Successful implementation of the solution areas requires addressing a number of barriers associated with each solution area. These barriers may be thought of as standing in the way of solutions. They are grouped by solution area and presented in column B of the diagram. Arrows pointing left from solution areas to barriers denote barrier removal processes.
- Column D presents the set of project outputs which together are designed directly to address / remove barriers associated with each solution area.
- Column E describes the outcomes that are expected to result from the implementation of the project outputs, under the conditions that related project assumptions (see box underneath the ToC figure) are met.
- Column F presents medium-term impacts beyond the lifetime of the project expected to result from achievement of the four project outcomes
- Taken together, columns C-F represent the project's four solution pathways—each enclosed by rounded rectangles and tempered by corresponding assumptions.
- Achieving the four project outcomes will, subject to additional assumptions, deliver the project objective, or long-term development impact beyond the life of the project.

In substantive terms, the project will improve the information base for government decision making (LDN database), will strengthen multi-stakeholder processes such as the Committees to combat desertification and climate change for greater coordination of programs and actions, will strengthen institutions including their access to funding tasked with the promotion of land uses that conserve or rehabilitate the fertility and ecosystem services of the land with special focus on forestry, agroforestry and sustainable, climate resilient agriculture practices, will strengthen extension services, will pilot forest rehabilitation and sustainable land management models, will strengthen value chains for climate resilient agriculture, promote learning, and empower women in decision making and as market actors. This set of outputs at institutional and field level will establish and reinforce capabilities within stakeholders that currently are weak, thereby reducing barriers to change. Specifically, government will be better able to analyse climate and land degradation risks and plan their interventions accordingly; the capabilities of government and non-government stakeholders to implement climate risk informed ecosystem restoration and climate resilient land use programs will be increased, and public and private actors will have increased capabilities to promote value chains that encourage sustainable production and land management. These increased capabilities of key actors and institutions, in turn, will lead to the short-term outcomes of strengthened policies and increased funding for climate resilient and sustainable land use planning; better informed programs for ecosystem restoration and conservation; and tangible benefits for

communities from increased climate resilience, reduced soil degradation, and income streams from sustainable value chains.

Over the longer term, agriculture and land use generally in Benin (and beyond) will become more sustainable and climate resilient, land degradation will decrease and ecosystems will be restored. Building on the project experience, rural people will have greater ability to adapt to climate change impacts through increased and more reliable incomes. Women will play a stronger and more empowered role in rural societies. Learning from this project will be exchanged with stakeholders in Benin and beyond through knowledge transfer. These outcomes will together enable achievement of the project development objective.

IV. RESULTS AND PARTNERSHIPS

Proposed alternative scenario with a brief description of expected outcomes and components of the project:

The long-term solution is to support achievement of Benin's Land Degradation Neutrality (LDN) targets through climate risk informed sustainable land and forest management practices, and strengthen the climate resilience of vulnerable populations, in the Niger Valley (PDA 1), Alibori Sud-Borgou Nord-2KP (PDA 2) and Zou-Couffo (PDA 5) Agricultural Development Areas. The project intends to:

i) promote sustainable and climate resilient production systems in degraded lands and deforestation hotspots in Benin;

ii) facilitate the development of green infrastructure, selected through integration of climate scenarios and resilience potential under current climatic stressors, to strengthen the Green Belt as a nature-based solution against desert advancement and support communities in climate change adaptation in the north of the country;

iii) strengthen the protection and preservation of forest ecosystems located in large agricultural production basins;

iv) identify and promote climate resilient value chains and increase productivity and competitiveness of the horticultural sectors, and;

v) facilitate the mobilization of innovative financing and the involvement of private sector for the scaling up and sustainability of climate resilient agriculture, climate risk informed sustainable land and forest management.

The project will address the barriers and challenges outlined above and will be carried out at national, communal, and local site levels where degraded lands have been targeted for improved, climate risk-informed land management practices to support the achievement of Benin's LDN goals and to help meet national NDC objectives for climate change adaptation. As noted in the climate risks section above, the project is designed to address not only

impacts that are already observed but also to respond to a range of anticipated temperature change, together with a corresponding range of potential impacts on the agricultural sector, on ecosystems, and on water resources through the planning horizon of 2050.

At the national level, the project will carry out activities to strengthen the capacity of the General Directory of Environment and Climate (DGEC), under the Ministry of the Living Environment and Sustainable Development (MCVDD) to meet the country's LDN and climate change adaptation commitments, and the Ministry of Agriculture, Livestock and Fisheries (MAEP) to attain its national agricultural production goals in line with its objectives for adapting agricultural practices to withstand climate change as articulated in its NDC.

The project will also facilitate the development of guidelines for potential funding mechanisms to enable the National Forest and National Agricultural Development Funds to function effectively and sustainably into the future; this will ensure continuity in supporting individual producers, farmer associations, and producer unions to implement technologies for climate resilient agriculture, and climate risk informed SLM and SFM.

At the local level, the project will provide support to generate land and forestry benefits, including critical ecosystem services, by improving the technical capacity of land planners and managers to integrate climate change into management plans, apply management plans, climate change vulnerability analysis and other tools for integrated landscape restoration and climate resilient agricultural planning. The project will create stakeholder awareness and build the capacity of agricultural land managers and national agency staff to support the scaling up of integrated, climate resilient and risk informed landscape management approaches in three targeted PDAs, and ensuring their alignment with national LDN targets, climate adaptation needs and objectives.

The project will raise awareness and strengthen capacities of beneficiary communities at the local level in the development of climate resilient value chains in non-timber forest products (NTFP) such as the African locust bean (*Néré*), *Parkia biglobosa*, the Shea tree (*Karité*) *Vitellaria paradoxa*, baobab (*Adansonia digitata)*, fruit trees (citrus, mango, cashew), and food crops (maize, sorghum, rice, cassava, yam, sweet potatoes, groundnuts, cowpea etc). The local tree species néré, karité and baobab are widespread savanna trees that are well known for their resistance to drought and even light fire, and are in common use among the local population. All three species are used in local culinary needs and have important local markets, while especially karité butter is traded internationally for cosmetics and as a substitute for cocoa butter. The introduced, but very common, cashew trees are not only highly resistant to climate variability and change, but also particularly well adapted to infertile soils and have significant potential In export markets. For their part, improved varieties of mango and citrus are more demanding in terms of soil fertility and water needs and require careful assessment of site conditions prior to planting. The mentioned food crops are all staples of the region, with grains being more used in the north and tubers more in the south. With increased climate change impacts, there may be a

gradual shift from maize to sorghum in the north and from yam to cassava in the center and south of the country. However, crop choices are to a large extent determined by local customs and preferences, which may delay local responses to climate pressures.

Alternative, diversified, income-generating activities such as livestock production, organic cultivation, climate resilient agroforestry and agriculture, transformation/processing of agricultural and fruit products, and small-scale market gardening of high-value crops (e.g. tomatoes, okra, chili pepper) will be promoted. Efforts will also be made to reduce the use of fire as a tool in land management, with the objective of reducing burning frequency and avoiding uncontrolled burns that lead to the degradation of soil and vegetation.

The project will adopt an integrated approach based on local vulnerability assessments and instigating site-specific solutions that include:

i) developing and applying sustainable community forest management tools, based on participatory planning approaches;

ii) implementing climate risk informed Sustainable Land Management (SLM), climate resilient agricultural practices and soil fertility improvement techniques;

iii) providing extension services and material resources for agroforestry with fruit and fodder trees as an alternative to annual crops, e.g., in Za-Kpota, Covè, Klouékanmè and Aplahoué; communes, and

iv) initiating large-scale, ecosystem appropriate restoration that factors in climate projections and contributes to the Green Belt initiative to counter the advancement of the desert in Karimama, Kouandé, Ségbana and Gogounou in northern Benin.

Beekeeping will also be promoted to enhance restoration at site level and to aid the development of fruit tree plantations, while providing diversification of livelihoods. The alternative scenario is centered on community-inclusive, multi-stakeholder collaborations at national and local scales that integrate climate change impacts and adaptation needs with addressing and reversing land degradation and deforestation. The value chain for beekeeping is already under development in municipalities across Benin. Key links across NGOs, microenterprises and individuals are in place and an organization exists between producers and buyers with bottling and packaging efforts. Local skills and competencies exist in terms of manufacturing services, hive repair, harvesting, packaging, marketing. Expertise also exists to train and organize community-level actors. The above actors will be targeted in the municipalities of intervention and will be reinforced with support for the strengthening of production and marketing capacities. In this way, the project will employ existing local expertise for the further development of the value chain already under construction.

Within the three PDAs, site-level activities under components 2 and 3 will take place within eight communes, which together cover 1.2 million ha. Analysis of satellite imagery and ground-level consultations during the PPG have further identified key hotspot areas of degradation, as shown in a set of district-level maps presented in Annex 14.6.

Social and environmental safeguards

As noted in the Strategy section above, the project will be implemented in compliance with all UNDP Social and Environmental principles and standards, as per UNDP's revised SES Policy (January 2021).

Based on the findings of the Social and Environmental Screening Procedure (SESP), the following assessments and plans will be implemented (for details, see ESMF, Annex 9):

- As the project is 'Substantial' risk with potential upstream impacts, a Strategic Environmental and Social Assessment (SESA) is required for the policy-level activities. The SESA report (and Action Matrix) will integrate the findings of the Environmental and Social Impact Assessment (ESIA) required for field-level activities.
- The SESA will be developed to ensure that the impacts of upstream activities—especially those included in project Component 1—are assessed and mitigation measures are identified. A SESA will be developed for each targeted policy (for details, see Annex 9, Environmental and Social Management Framework – ESMF)
- An ESIA will be developed for each PDA.
- A Stakeholder Engagement Plan will be implemented, beginning with the project inception phase.
- An Ethnic Groups Plan will be developed for each of the three target PDAs. The three plans will take into consideration the involvement of the ethnic groups present in the target areas, including any ethnic minority at field level and at institutional level.
- The Stakeholder Engagement Plan and the three Ethnic Groups Plans will precede, and strongly support, the implementation of activities planned under outputs 2.1, 2.2, 2.4, 3.1 and 3.2, thereby ensuring compliance with UNDP SES.
- A Gender Action Plan will be implemented in line with Component 4, ensuring compliance with UNDP SES.
- A Livelihood Action Plan may be developed, if and when needed, in line with the ESIA findings.
- A Pesticides and Herbicides Management Plan may be developed for relevant activities, in line with the ESIA findings. The plan will especially support the implementation of activities under outputs 3.1 and 3.2, thereby ensuring compliance with UNDP SES.
- An Environmental and Social Management Plan will be developed for each PDA and will include actions to mitigate all risks identified in the SESP.

No activities which could have adverse impacts on the rights, lands, resources and territories of marginalized Indigenous Peoples (such as ethnic minorities) will commence

until the ESIA/ESMP is completed (and its public disclosure period), impact management measures established, and broad community consent has been obtained.

Project components, results / outcomes, outputs and indicative activities are described below.

Component 1: Political, financial, institutional, and regulatory frameworks to achieve climate risk informed Land Degradation Neutrality (LDN) and advance integration of vulnerability assessments and adaptation options within land use decisions.

This component is focused at the national level on strengthening the enabling environment, including capacities of key agencies, for implementation of climate-risk informed LDN, including actions related to SLM, SFM and associated livelihood issues. Establishing and building capacities to monitor and report on land degradation, land cover change, ecosystem services, as well as climate risks, vulnerability and adaptation metrics, will be central to assessing both the changing conditions and the impact of actions being taken. Effective field-level implementation, including under component 2, will benefit from multi-sectoral consultations to review and harmonise relevant policies, sectoral strategies and programs in order to mainstream LDN targets, informed by climate change scenarios, and objectives. Engaging multiple government entities will be necessary, and activities will include development of tools and measures to facilitate the adoption and operationalization of the principle of no degraded, bare, or abandoned land due to agricultural practices. Support, advice and awareness-raising will be provided to representatives at all levels of decision-making to enable the revision of national strategies, plans and sectoral indicators in accordance with the recommendations inherent and contained within updated regulatory texts.

Work under this component is centered on achievement of the following outcome:

OUTCOME 1.1: STRENGTHENED NATIONAL POLICY, GOVERNANCE AND FINANCIAL FRAMEWORKS AND CAPACITY TO IMPLEMENT CLIMATE RISK INFORMED SLM AND SFM, AND CLIMATE-PROOFED SUSTAINABLE LIVELIHOODS CONTRIBUTES TO ACHIEVEMENT OF LDN

The above outcome will be delivered through a set of five inter-connected outputs, as follows:

- Output 1.1 will establish a national LDN and restoration database at DGEC under MCVDD to serve as the hub for national monitoring and national reporting on LDN.
- Output 1.2 will build national reporting and monitoring systems for tracking LDN and various aspects of climate change vulnerability and adaptation.
- Output 1.3 will strengthen the National Committee on Desertification as a key tool for national-level coordination.

- Output 1.4 will raise the profile of LDN within national environmental funding mechanisms.
- Output 1.5 will build capacities of key agencies for climate risk informed and resilient SLM, SFM and restoration.

The above-mentioned outputs are described in further detail below.

Output 1.1: National LDN and restoration database established within the DGEC under MCVDD, bringing together national data sources including related data on climate impacts, vulnerability, and adaptation needs, and linking to global systems for monitoring restoration and LDN

Under this output, a national LDN database and information system will be established at the General Directory of Environment and Climate (DGEC), under the Ministry of the Living Environment and Sustainable Development (MCVDD). Experts from different sectors—including forestry, agriculture, climate change and land use planning—and from academia will work together to develop and agree on data gathering and data sharing protocols. The system will thus pull together various sectoral sources of data, e.g., forest cover and forest permanent estate, agricultural activities (agro-industrial and small farming around villages), general land allocation, tenure rights, protected areas and hotspots of biodiversity, land dynamics (productivity, land cover, carbon stocks, soil erosion linked to changes in precipitation), observed meteorological data, downscaled climate change scenarios, and livestock corridors, resulting in a more comprehensive overview, while providing actionable data and projections of climatic variables (e.g. precipitation and temperature) for managers on the ground. It will also underpin reporting under international conventions (see Output 1.2) and associated commitments, e.g. by linking to the IUCN-managed BC Barometer for restoration progress. While the database will be national in scope, it is expected that initial data sources and coverage will be more extensive and accurate in the case of the three project-supported PDAs (see Component 2).

Indicative activities include:

1.1.1. Building on work done during PPG, complete detailed assessment of relevant equipment specifications, GIS and spatial analyses and capacity building requirements and provide targeted support to ensure effective participation in the process, particularly within DGEC under MCVDD

1.1.2 Support and strengthen existing national networks for inter-sectoral data sharing on LDN, climate impacts, vulnerability and adaptation, e.g., REDD+ national coordination mechanism, National Committee for Climate Change, Technical Group for Land Degradation, land-use planning ministry and other sectoral ministries

1.1.3 Assess and strengthen existing cartographic databases of land use, particularly agricultural uses, and associated land degradation and ecosystem services

1.1.4 Support the development of improved national baseline maps indicating land and forest status, soil type and soil fertility, as tools for monitoring LDN (see also Activity 2.2.1)

1.1.5 Build capacities for effective use of enhanced databases and maps

Output 1.2: National monitoring and reporting systems for tracking climate change impacts on and vulnerability in the agricultural sector along with changes in adaptive capacity, land cover, land degradation, restoration, forest ecosystems and ecosystem services

Building on the establishment of the national LDN database, a system for dynamic monitoring of land use status and change will be established. The system will focus on the agricultural sector in particular and will be designed to support monitoring and indicators at the level of PDAs, among other levels of aggregation. It will include indicators on land use change, climate hazards and vulnerability to climate change, and indicators of adaptive capacity. Relevant targets will also be agreed. Key national- and local level-stakeholders will be engaged, including both government and private sector representatives. The system will be pilot tested in the three project PDAs, where it will benefit from a pilot effort to establish a participatory M&E system (see Outputs 2.1 and 4.2 below), the latter also addressing issues such as governance, FPIC, etc. Finally, the system will be used to support production of a biannual national report on the impacts of climate change and production sectors on forest ecosystems and on the state of land degradation.

Indicative activities include:

1.2.1 Develop an observatory for monitoring agricultural dynamics, climate change impacts on agriculture and the vulnerability of forest ecosystems, including agreeing on indicators to be monitored

1.2.2 Pilot testing in three PDAs of an operational system for monitoring agricultural dynamics and the vulnerability of forest ecosystems, based on existing and upgraded cartographic information

1.2.3 Prepare two biennial national reports (2024 and 2026)

Output 1.3: The National Committee to Combat Desertification, National Committee for Climate Change and the National REDD+ Committee are strengthened to improve the coordination, ownership and capacity of national authorities to address projected climate change risk and sensitivity scenarios.

The National Committee to Combat Desertification was created in 2008 and the National REDD+ Committee was created in 2017, but has met only rarely since. Its secretariat is provided by the DGEC under MCVDD. In addition, the National Committee for Climate Change was decreed in 2002, with mandate for both adaptation and mitigation. However, there is little coordination among the three committees. The project will support the reactivation of these potentially important mechanisms as necessary tools to coordinate

data sharing and action related to LDN. It will also support an integration of LDN and climate change policies by promoting joint meetings of the three committees and an expansion of the former committee's mandates to include climate change adaptation, which is closely linked with both LDN and REDD+.

Indicative activities include the following:

1.3.1 Analyze the structure, capabilities, and operating rules of the committees and propose any recommended changes, especially an explicit mandate to address climate change vulnerability and adaptation assessments and policies and to integrate them with LDN and REDD+ mechanisms.

1.3.2 Support annual meetings of the two Committees, expanded as needed to cover CCA, at which a set of common objectives and a work plan for data sharing and other joint actions in support of integrated LDN, REDD+ and CCA policies and actions will be adopted.

1.3.3 Strengthen the technical capacity of ministries and other government agencies through the development of strategy documents (e.g., REDD+ strategy, climate vulnerability assessments and adaptation action plans, regular review of land degradation policies and activities) to contribute to the objectives adopted by the Committees.

Output 1.4: National environmental funding mechanisms integrate CCA and LDN objectives, and have enhanced capacity to mobilize and manage relevant funding

The project will facilitate the development of guidelines for existing funding mechanisms— including the National Environment and Climate Fund, National Agricultural Development Fund and potentially others— to encourage and guide these funding mechanisms in efforts to support individual producers, farmer associations, and producer unions to implement technologies for gender responsive, climate-resilient agriculture, and climate risk informed SLM and SFM.

Indicative activities include the following:

1.4.1. Develop guidelines for Federal and local Government financing of climate risk informed SLM, SFM and restoration efforts, and gender responsive climate resilient agriculture, including eligibility criteria for grant or loan financing

1.4.2 Develop a program of climate risk informed SLM and SFM actions at national level with harmonized financing procedures and integration of environmental, economic and social aspects

1.4.3 Insert an SLM budget line within the mechanism for transferring financial resources to municipalities

Output 1.5: Training and equipment provided to key agencies (DGEC under MCVDD, National Geographic Institute, Directorate of Remote Sensing and Ecological Monitoring, National Institute of Agricultural Resources) to improve implementation of climate risk informed, gender-responsive and resilient SLM technologies and conservation of production landscapes, with improved coordination and monitoring of climate change impacts, land degradation trends, restoration, and sustainable forest management

Several government agencies have significant roles to play in supporting the project objective, including monitoring and coordination. This output will strengthen their capacity to do so, in line with existing policy mandates.

Indicative activities include the following:

1.5.1 Implement a training program for key organizations, including DGEC under MCVDD, Directorate of Remote Sensing and Ecological Monitoring, National Geographic Institute, National Institute of Agricultural Resources, etc.

1.5.2 Carry out multi-criteria climate change risk and SLM assessments, taking into account synergies and comparative advantages on the environment

1.5.3 Provide necessary equipment to the National Geographic Institute and the Directorate of Remote Sensing and Ecological Monitoring to support their forest cover monitoring functions

1.5.4 Provide capacity building support (equipment and training) to Ministries and research institutions to enable management of 'the databases'

1.5.5 Implement training programs to access, interpret and use climate scenarios and vulnerability assessments, and especially to adapt them to local conditions through downscaling and through locally collected data based on observations and interviews.

Component 2: Restoration of land and forest ecosystems for improved agricultural productivity, prevention of deforestation, and enhanced climate resilience of vulnerable communities

Under this component, the project will assist the Government of Benin to build on the enabling environment being supported under Component 1 and implement concrete actions within eight target districts of the project PDAs (see **Table 9**).[66] The project will implement an integrated, collaborative approach to delivering climate change adaptation actions, including climate-resilient SLM, to restore degraded lands, and climate resilient agricultural practices on farms to reduce further land and soil degradation, and enhance adoption of gender responsive, climate resilient agricultural value chains (through Component 3, in particular), and thereby improve food security for smallholders and farmer communities. Efforts will be focused on carefully defined target sites, but with mechanisms in place to ensure wider impact (the latter through Component 4, in particular).

[66] Annex 14.6 presents additional information, including SFM and SLM potential in each district, along with more precise geographical details at the level of 'arrondissement' and village.

Table 9: Project intervention zones within each PDA and indicative breakdown of GEF-supported SFM & SLM actions*

PDA	Département	Commune	Area (ha)	SFM area (ha)	SLM area (ha)
1	Alibori	Karimama	604 100	500	500
2	Atacora	Kouandé	450 000	2 000	1 000
	Alibori	Ségbana	470 000	5 000	6 500
	Alibori	Gogounou	491 000	7 000	2 000
5	Couffo	Klouékanmè	39 400	50	100
	Couffo	Aplahoué	91 500	50	2 400
	Zou	Cové	52 500	-	2 500
	Zou	Zakpota	40 900	400	-
		TOTAL	**2 239 400**	**15 000**	**15 000**

Note: The above breakdowns of SLM and SFM actions are approximate, based on total potential identified within each commune during the PPG.

Work under this component is centered on achievement of the following outcome:

OUTCOME 2: TARGET DEGRADED AND ABANDONED LANDS, FORESTS AND ECOSYSTEMS IN SELECTED PDAS 1, 2 AND 5 MANAGED AND RESTORED THROUGH CLIMATE RISK-INFORMED PLANNING AND ACTIONS

The above outcome will be delivered through a set of five inter-connected outputs, as follows:

- Output 2.1 will support the development of restoration and SLM / SFM components which incorporate locally relevant climate hazard data and risk mapping within management plans at various levels within the three PDAs.
- Output 2.2 will support restoration and sustainable land management at target sites.
- Output 2.3 will strengthen capacities of government extension services to provide extension services to farmers to strengthen agricultural resilience to climate impacts
- Output 2.4 will provide training and awareness raising support within the communities at the target sites.
- Output 2.5 will involve creating green infrastructure[67] resilient to projected climate impacts in four of the target communes (Karimama, Kouandé, Ségbana and Gogounou) to strengthen Benin's Green Belt against desert encroachment from the north.

67 Green infrastructure is a strategically planned network of natural and semi-natural areas with other environmental features designed and managed to deliver a wide range of ecosystem services such as water purification, air quality, space for recreation and climate mitigation and adaptation.

The above-mentioned outputs are described in further detail below.

<u>Output 2.1:</u> Integrated climate risk, land use, landscape restoration, and forest management plans, which incorporate climate scenario-based hazards and likely impacts, are developed and operationalized at target sites

Management plans currently exist for Parc W, the Pendjari Complex, and various classified forests in Benin. However, the capacity of responsible agencies to implement these management plans needs to be strengthened. In addition, few of the plans incorporate analyses of climate hazards and risks, well-developed strategies to restore lands and/or ensure SLM and SFM under climate change. Potential response of species used for restoration to future climate conditions is rarely considered in restoration or SFM plans but is an important consideration for long term resilience. Output 2.1 will firstly focus on the analyses of relevant range of climate change scenarios to identify hazards and potential risks at the landscape and farm scales for the two agro-climatological zones covered under this project, based in part on field-level data gathering within the eight target communes . This output will produce climate risks assessments for ecosystem based adaptation using established approaches[68], and with participation of local representatives, as part of detailed spatially explicit planning to allow for an integrated approach to planning for LDN and CCA in the target communes. This work will be done in collaboration with national universities (see Annex 8, Stakeholder Plan for details).

Based on updated analysis of climate change scenarios and potential risks, land use /land cover mapping, and in close cooperation with representatives of participating communes, local management authorities and communities, spatially explicit, participatory, local management plans will be created. These zoning and action plans—which will be closely aligned with any existing SDAC and PDC plans—will guide site-level implementation of climate risk informed restoration/SFM/SLM actions—including actions for direct support via GEF project funds as well as areas for eventual uptake and replication. In parallel, existing management plans will be reviewed and, where necessary, updated so that they cover climate change vulnerability and adaptation strategies, including soil and water conservation, LDN and other SLM / SFM related issues. This will include the preparation of hazard maps and risk models based on at least two climate scenarios.

Indicative activities under this output include the following:

2.1.1 Build capacity for data collection on multiple climatic, biophysical and agro-ecological variables and participatory, scenario-based analysis to support local level planning for both climate change adaptation and land degradation neutrality.

[68] Climate risk assessments to inform integration of climate change risks and impacts into planning for SLM, SFM and climate resilient agriculture will be developed using approaches such as the one produced by GIZ and UNU (2018): A guidebook for planners and practitioners. See here.

2.1.2 Field-level, participatory, survey-based data collection within the eight target communes to support climate risk and LDN analyses

2.1.3 Work with the cartographic division of DGERC to integrate readily available, regional downscaled climate scenarios to create a spatially explicit dataset on climate hazards and map potential risks for land use and land cover change in the eight communes, where available use crop and plant habitat suitability models for common species, to inform SLM/SFM and land use planning, to inform the process for identifying climate resilient value chains with local participation (Component 3), and develop up to date and improved land use, land degradation, soil fertility, climate hazards and risks' informed zoning maps of the overall intervention area, i.e. eight target communes, together covering 2.2 million ha.

2.1.4 Conclude data sharing agreements amongst sectoral Ministries and national and local organisations

2.1.5 Develop LDN scenarios and LDN neutrality targets—based on a multi-criteria analysis of sustainable land management, restoration actions and climatic hazards and non-climate risk analyses—and mainstream into emerging PDA Master Plans, with additional details for the participating communes

2.1.6 Support the incorporation of LDN and climate change aspects eight commune-level integrated, spatially explicit planning documents—"Schéma directeur d'aménagement de la commune" (SDAC) and "plan de développement communal" (PDC)

2.1.7 Build validated multi-dimensional local plans that are aligned with existing SDACs and PDCs, and that can be easily integrated within the SDACs and PDCs, supported by recognized local governance structure

2.1.8 Mainstream climate change hazards, risks and adaptation options SLM and SFM into eight commune-level Land Management Plans (PIGUS), including capacity-building strategies

2.1.9 Conduct climate risk assessments for ecosystem based adaptation[69] using the climate hazards dataset (2.1.1), integrate relevant modeled outputs from GEF-CI SPARC and participatory input from communities to identify cost effective and locally relevant adaptation measures in order to update management plans for the classified forests of Sota, Mékrou and Kouandé , in line with commune-level plans, along with soil conservation and LDN plans for the classified forests of Alibori Superior and Trois Rivières

<u>Output 2.2:</u> Degraded lands amounting to at least 15,000 hectares, and at least 15,000 hectares of forest, are under climate risk informed and resilient restoration and functional and sustainable management regimes.

[69] Using, for example, the GIZ – UNU guidance to practitioners (2018).

A key element of the planning processes described under Output 2.1 above will be to identify and prioritize natural ecosystems for restoration[70], including natural regeneration, based on criteria that include resilience to current climate change and future projections using downscaled climate scenarios and available climate suitability models, potential restoration of fallows in an ecosystem appropriate manner, development of community forests, and the promotion of private, communal and community restoration zones with valuable, climate resilient species for degraded lands and forests, informed through a multi-criteria analysis. This prioritization exercise will build on work completed during the PPG, which led to a series of commune-level degradation maps presented in Annex 3 below.

Improved land management at these sites will enable them to function as carbon sinks, and will include nature-based adaptation options to improve soil moisture, reduce soil erosion, regulate the microclimate, and provide a diversified source of NTFPs resilient to climate change (see Component 3 below). This will be achieved through the introduction of climate-smart agriculture and improved, climate resilient SLM and agricultural practices to reduce carbon release from soil, increase water infiltration, conserve topsoil,and thereby enhance water availability to crops.

Indicative activities include the following:

2.2.1 Identify exact locations for land and forest restoration and sustainable management, building on PPG site selection process and incorporating additional climate scenarios and risk mapping work undertaken under 2.1.1, and 2.1.8 as well as nature of restoration or SLM/SFM approach. Site selection will take into consideration climate risks (risk maps produced under 2.1.1) and opportunities to reduce them (e.g. by restoring erosion prone slopes and riparian forests), based on climate hazard maps and risk models.

2.2.2 Provide extension and material support (e.g., equipment, seedlings, compost, climate resilient agriculture (CRA) techniques and inputs) for conservation and improvement / restoration of cropland and conservation of soil fertility in identified priority locations (see 2.2.1) and in line with plans developed under activities 2.1.2 - 2.1.4 above

2.2.3 Provide extension and material support (e.g. equipment, seedlings and materials for the plant nurseries) for conservation and improvement / restoration of forest areas and conservation of soil fertility in identified priority locations (see 2.2.1) and in line with plans developed under activities 2.1.5 and 2.1.6 above, including enriching and developing protection series / green belt in the classified forests of Alibori Superior, Trois Rivers, Sota, Mékrou and Kouandé with versatile forest species with high tolerance to droughts and floods.

70 Through, for example, working with partners to integrate current climatic stress and projections into models such as those produced by IIS-Rio and applied in Brazil, countries in South America and the global scale. Also see: Strassburg, B. et al. 2020. Global priority areas for ecosystem restoration. Nature.

2.2.4 Protect the banks of the Ouémé, Zou and Couffo river basins against erosion through reforestation of 1,000 hectares of riparian forest using native species with high tolerance to drought and floods, in line with plans developed under Activities 2.1.5 and 2.1.6

2.2.5 Establish multi-purpose water reservoirs to facilitate access to clean water (particularly for select water-saving crops and value chains), by, and avoid conflict among, agricultural producers, livestock breeders and migrant and other vulnerable populations

Output 2.3: Awareness raising and training of 1,000 national and local government and administration officials (including ATDAs, DGEC under MCVDD and DGEFC) and representatives of private sector in climate resilient, gender-responsive and degradation neutral planning and policies, with focus on agriculture, animal husbandry and forestry, targeting the mainstreaming of CCA and LDN in all policies and administrative decisions.

This output will begin with the development of capacity building (training) materials in a range of key areas. These will be carefully designed to address specific issues faced by officials and technical personnel involved in issues related to LDN, climate adaptation for the agricultural sector, etc. within the three target PDAs. Particular emphasis will be on agricultural extension personnel. It will be to a large extent through these agents of change that the project will expect to reach far and wide to agriculturalists and other land users.

Indicative activities include the following:

2.3.1 Development of capacity building modules and materials, based on international experience, with specific adaptations for conditions in Benin as well as further specifications by PDA, covering: (i) integration of SFM, SLM in projects, business plans, laws and sector strategies; (ii) soil fertilization technologies; (iii) technologies for restoring degraded lands; (iv) approaches to maintaining soil fertility and respecting degradation neutrality standards; (v) Climate vulnerability and risk assessments through a combination of use of climate scenarios and local experiences and observations to inform the selection of locally relevant adaptation measures including selection of crop and tree species and varieties, planting dates, soil management practices to increase water availability to crops (e.g. mulching), irrigation practices, crop diversification, provision of climate resilient crop varieties, etc. (vi) methods of soil water conservation, (vii) safeguarding farms against risks (infestations, flooding, bush and vegetation fires, etc.); (viii) protection of forests against brush fires; (ix) cultivation technologies and fodder storage; (x) approaches and standards for forest management and the establishment of carbon sinks and protective belts; (xi) techniques for collecting and processing agricultural and forestry seeds; (xii) approaches and production methods of agricultural and forestry plants in a context of climate change, etc.

2.3.2 Delivery of training modules and materials to at least 1,000 national and local government and administration officials (including ATDAs, DGEC under MCVDD and DGEFC), parliamentarians and private sector representatives

2.3.3 Awareness raising seminars, workshops and information materials provided to decision-makers and other officials

Output 2.4: Extension services in climate resilient, gender-responsive and degradation neutral agriculture, animal husbandry and agroforestry provided to 24,000 farmers and community leaders (50% women), including on climate resilient and degradation neutral cotton production.

Extension services, training and related capacity building measures will be delivered to farmers and other land users within each of the eight target communes. These efforts will support direct actions under Output 2.2, as well as laying the groundwork for uptake and replication across the eight communes. This work will be led by ATDAs, DGEC under MCVDD and DGEFC and supported by NGOs.

Indicative activities include the following:

2.4.1. Through a participatory process including stakeholder mapping, the participatory mapping of climate hazards and risks, and land degradation vulnerability as perceived locally in combination with available data, identify local priorities and action plans for the promotion of climate resilient and degradation neutral agricultural, livestock and agroforestry practices and organize user groups (including women and youth groups) for each identified activity.

2.4.2. Implement intensive train within (2ing and extension programs in the pilot communities, led by local NGOs in partnership with community-based groups and under the guidance and supervision of government extension services. Considering the high number of illiterate people (especially women) in the rural population especially in the north of the country, extension methods will rely on face-to-face meetings rather than printed communication tools or social media.

2.4.3. Develop radio programs on a range of climate change and land degradation topics, identified by a local advisory committee, and emit them in the most common local languages.

2.4.4. Provide local groups with the essential tools and inputs for climate resilient agriculture and land restoration, such as farm tools, supplies for village nurseries, seedlings, etc.

Output 2.5: Strengthened Green Belt infrastructure against the advance of the desert in the north of Benin

Under this output, the project will support the creation of green infrastructure resilient to projected climate impacts in two of the project's target communes—Karimama and Kouandé—in order to strengthen Benin's Green Belt against further desert encroachment from the north. Activities will focus, *inter alia*, on improved soil management through active organic cultivation, development of tree nurseries for reforestation, improved manure techniques, and fire management. As a result, the project will contribute to improved, climate-smart agricultural management and forest protection practices for LDN and sustainability.

To fortify the Green Belt and provide guidance to climate-resilient agricultural development, targeted efforts will be required to develop nurseries for trees to replant in forest corridors where agricultural production occurs. Agriculturalists will receive training on sustainable land management techniques, climate risk informed landscape restoration and climate resilient agricultural techniques, including promotion of organic cultivation and increasing use of organic compost and integrated pest management techiques, reduced use of fire, controlled grazing of communal areas, diversification of cropping systems to reduce risk, and the integration of local, drought and fire resilient tree species such as néré, karité and baobab. Natural regeneration potential under likely climate projections, for example, through downscaled prioritization maps, will help to identify sites where natural regeneration and other restoration practices can be supported.[71]

Indicative activities include the following:

2.5.1. Disseminate existing technical guidance materials developed by other initiatives (e.g. PROSOL) relating to "Integrated management of soil fertility", "soil and water conservation", "conservation agriculture" and "agroforestry and individual forests"

2.5.2. Establish at least 200 ha of commercial plantations (150 ha of forest species and 50 ha of forage species)

2.5.3. Support local communities to establish at least 100 ha of communal and individual fruit plantations

2.5.4 Promote arboriculture as well as the vegetated delineation based on, for example, palm trees (rônier), néré and shea trees, which are all highly resilient to climate variability and drought and even support occasional fire, as a means of diversifying farming systems thereby reducing risks related to a largely unpredictable climate future.

2.5.5. Promote the use of soil improving plants, e.g. mucuna, pigeon pea (*cajanus cajan*); and *Vigna radiata* for the restoration of degraded agricultural sites (noting that pigeon pea has been used in the West African savanna for many years and is noteworthy for its positive influence on associated food crops (e.g. maize) as well as a producer of edible seeds and fodder (see also Outputs 3.1 and 3.2 re. final species selection.

Component 3: Building diversified income-generating activities and value chains to strengthen community resilience to climate change

Under this component, the project will engage at community level within the three PDAs—in particular within the above-described target areas—to support the development of income-generating activities and agricultural value chains. These efforts are being specifically designed to complement and synergize with the integrated climate change adaptation and LDN actions under Component 2, and to deliver lessons for dissemination under component 4, while promoting long-term resilience to climate change.

71 See for example : Strassburg et al 2020. Global priority areas for ecosystem restoration. Nature

Work under this component is centered on achievement of the following outcome:

OUTCOME 3.1: COMMUNITIES AT PILOT SITES RECEIVE TANGIBLE BENEFITS FROM ENGAGEMENT IN DIVERSIFIED, CLIMATE RESILIENT INCOME GENERATING ACTIVITIES (WITH SUPPORTING VALUE CHAINS THAT PROMOTE LDN)

The above outcome will be delivered through a set of four inter-connected outputs, as follows:

- Output 3.1 will consist of in-depth analyses and selection of short-listed value chains from the perspective of their potential to generate income for local communities while delivering a variety of national and global environmental benefits, including enhanced climate change resilience for households and communities[72]
- Output 3.2 will strengthen selected climate resilient and gender responsive value chains through investment and extension support.
- Output 3.3 will deliver financial support and partnerships to forest-friendly and climate resilient income generating activities including, *inter alia*, products being supported under Output 3.1.
- Output 3.4 will help to increase market access for farmers and communities practicing climate-resilient, zero-degradation agriculture and agro-forestry, including NTFPs.

The above-mentioned outputs are described in further detail below.

Output 3.1: Five agricultural and agro-forestry value chains are identified and assessed according to their potential to be climate resilient and deliver multiple local, national and global benefits, including income generation, LDN benefit and enhanced adaptive capacity within project PDAs

Initial activities under this output will involve the selection of five climate-resilient agricultural and agroforestry value chains, from the short list presented in **Table 10**, which was developed based on analysis and consultations during the PPG.

[72] The selection process will utilize the following methodology: *Toolkit for value chain analysis and market development integrating climate resilience and gender responsiveness - Integrating agriculture in National Adaptation Plans (NAP-Ag) Programme*. 2020. FAO and UNDP.

Table 10: Short list of agricultural and agroforestry value chains for possible in-depth analysis and support

Pôles de développement (PDA)	Chaines de valeurs agricoles	Chaines de valeurs agroforestières
PDA 1 : Valley Niger Karimama	Riz, cultures maraichères, volailles, petits ruminants	Parkia biglobosa (néré), Vitellaria paradoxa (karité), Rônier
PDA 2 : Alibori Sud-Borgou Nord-2KP : Ségbana, Gogounou, Kouandé,	Maïs, riz, igname, soja, cultures maraichères, caprin, volailles	Parkia biglobosa (néré) Vitellaria paradoxa (karité), Adansonia digitata (baobab), manguier, anacardier, colas (garcinia, nitida), apiculture
PDA 5 : Covè Zakpota-Aplahoué Klouékanmè	Riz, maïs, niébé, arachide, cultures maraichères, pois d'angole, volailles, petits ruminants	Agrumes, palmier à huile, baobab, néré, colas (garcinia, nitida), Xylopia, Tetrapleura apiculture

The above list also reflects the list of priority agricultural products identified at the time the PDAs were first identified and thus remain in line with Government priorities.

Once the final list of five value chains has been agreed, a detailed analysis will be made of the entire value chain for each potential product. This analysis—which will be undertaken in close consultation with local communities and will build on discussions held during the PPG —will integrate climate change impacts and resilience as criteria, based on published toolkits[73]. It will include economic and financial analysis of climate-resilient value chains and adaptation options, including assessment of the vulnerability of smallholder farmers and small-scale cattle herders to climate change, based on application of analytical tools such as SHARP.[74] Farmer preferences for adopting more climate-resilient value chains and climate resilient agricultural practices will be carefully identified, in line with the project's stakeholder participation plan (see **Annex 8)**. Finally, the value chain analysis will consider market demand at various levels, and the potential for investment and other partnerships (see Output 3.3 below). The tool to be deployed for this analysis is the UNDP -FAO Climate Resilient and Gender Responsive Value Chains tool.

Indicative activities, all of which will contribute to the final value chain assessment reports, will include the following:

3.1.1 Map the short-listed value chains

73 The selection process will utilize the following methodology: *Toolkit for value chain analysis and market development integrating climate resilience and gender responsiveness - Integrating agriculture in National Adaptation Plans (NAP-Ag) Programme*. 2020. FAO and UNDP.

74 Self evaluation and holistic assessment of climate resilience of farmers and pastoralists (SHARP). Accessed at : http://knowledgecentre.resilientfoodsystems.co/kc/resource_library

3.1.2 Undertake surveys within potential beneficiary communities to assess preferences among alternative value short-listed chains

3.1.3 Select five priority value chains, based on pre-determined selection criteria and with reference to PDAs

3.1.4 Prepare five value chain analyses, including priority measures needed to strengthen climate resilience. These should include, inter alia: (i) good practices and associated technologies for the storage / conservation and processing of various products (plants, animals, fisheries and forestry, etc.); (ii) the potential contribution of each product / value chain in terms of climate resilience, zero degradation or restorative production and gender-balanced income generation; (iii) specific barriers and opportunities associated with each value chain; (iv) climate change impact assessment across all priority value chains to identify the adaptation measures to reduce risks of climate related losses and damages

3.1.5 Develop an action plan for strengthening each value chain

Output 3.2: Selected climate resilient and sustainable agricultural and agroforestry practices and market channels are strengthened through investments and extension support for climate resilient, degradation neutral and gender responsive agricultural practices, leading to triple-bottom-line benefits, strengthened adaptive capacity of vulnerable communities, job and SMME creation

This output will support the implementation of value chain action plans developed under Output 3.1. These action plans will provide the specific details and locations of support, which will focus on removing key barriers and demonstrating short- and medium-term benefits and lessons. These will include a combination or training, technological and logistical support. Support to women and women's groups will be prioritized wherever possible.

Indicative activities include the following:

3.2.1 Deliver training to strengthen agricultural skills related to the selected products, including: (i) techniques for managing soil fertility and (ii) climate-resilient agricultural practices

3.2.2 Improve access to information and to appropriate post-harvest processing and storage equipment and infrastructure, at different levels of the marketing chain, to help processors better respond to quantitative and qualitative aspects of market demand

3.2.3 Contribute to the sustainable intensification of production in the selected sectors by supporting the adoption of improved technologies adapted to the needs of farmers, in particular women, and enabling them to better respond to market signals

3.2.4 Support efforts by cooperatives to strengthen crop processing and storage

Output 3.3: Local, national, regional and international partnerships developed to support and promote 'forest-friendly', climate resilient and gender-responsive income-generating opportunities

Support under this output will go beyond the five priority value chains (see Outputs 3.1 and 3.2 above) to encourage investment in a wider range of sustainable and climate-resilient income-generating opportunities within the target project areas. A key criterion for identifying the activities to be supported will be their potential to contribute to the aims and objectives of the integrated, climate-resilient land use, land restoration and forest management plans being developed under Output 2.1 above. For each of the above areas, and others identified in the plans, implementation partnerships will be sought, with the goal of leveraging additional funding into activities that will combine climate-resilient income generation with LDN, SLM and SFM co-benefits. The PPG has clearly shown that farmers and local traders face significant barriers to obtaining loans from commercial banks owing to their difficulty of providing co-lateral (land is not usually individually owned in rural parts of Benin), that agricultural production is perceived as risky, and that loans needed by individual farmers or families are mostly relatively small.

Indicative activities include the following:

3.3.1 Develop partnership with micro-financing institutions to increase the flow of financial services (campaign credit, equipment credit, etc.) to encourage adoption of SLM and SFM practices. The project will work with commercial credit institutes and government on the possibility of designing standardized loan packages for communities and cooperatives engaged in climate-resilient and degradation neutral activities such as certain agroforestry value chains, small livestock production, etc. that would be accompanied by extension services to reduce the risks of default.

3.3.2 Establish partnerships with local communities, NGOs, forest department directorates, and ATDAs to train farmers and ranchers (particularly women), in climate resilient agriculture. This activity would focus on the creation and strengthening of land user, processor and trader groups and cooperatives that would work under the supervision and with the support of the responsible government agencies (e.g. forestry) and civil society organizations, thereby increasing their access to credit, technical support and markets, and reducing risks for individuals and families engaged in agricultural and forestry production, processing and trade. This would also include the organization of savings groups within communities to cover smaller investment needs or complement external loans.

3.3.3 Initiate a national dialogue (Government, financial sector, NGOs) on de-risking mechanisms to provide loan guarantees for micro-projects for land degradation neutral (or regenerative) and climate resilient income-generating opportunities. This would build on climate risk assessments of value chains to identify relatively low-risk land use options and would engage with national and local governments, the private sector and civil society organizations active in the area on the possibility of creating partial guarantees for loans and investments in degradation-neutral and climate-resilient land

uses and value chains. This discussion is rather new in Benin and therefore the immediate objective of the project would be to create a discussion forum for de-risking needs and potential mechanisms and sensitize government and other actors for the issues involved.

Output 3.4: Strengthened cooperatives and farmer organizations, and negotiated partnerships with traders and processors, for farmers and communities practicing climate-resilient, zero degradation agriculture and agroforestry

Support for enhanced cooperatives, farmer organizations and negotiated partnerships will be aimed at improved market access for farmers and communities practicing climate resilient, zero degradation agriculture and agroforestry, including NTFPs. This output will build on value chain analysis selection and support being undertaken under Outputs 3.1 and 3.2 in order to further strengthen the support mechanisms and marketing opportunities in key selected value chains.

Indicative activities include the following:

3.4.1 Develop market research and feasibility assessment for new products based on the "Market Analysis and Development (ADM)" approach and in consultation with potential beneficiaries

3.4.2 Organize initial meetings between buyers and sellers, and trade shows and exchange trips in the West and Central African sub region and / or support the participation of local producer groups (including cooperatives) in such meetings

3.4.3 Support improve packaging and delivery of new products to market

3.4.4 Support identification of new business partners for SMEs

Component 4: Gender Empowerment, Knowledge Management, and M&E

The project is expected to generate a wealth of experience and lessons from the activities being implemented in Components 1-3. While component 1 activities are national in scope, on-the-ground and other actions under components 2 and 3 will be more limited, and often local (e.g. village and commune level), in geographic scope, beginning with actions aimed at restoration, SLM and SFM of specific target areas within the PDAs. While such actions are critical in that they will support actual environmental change and restoration within 30,000 ha of degraded lands, the impact of such changes in terms of transforming broader areas and processes will depend on the *diffusion* and *replication* of the innovations and good practices being demonstrated. The extent and success of this process will depend in turn on a variety of behavioral and other factors. Component 4 offers an approach, based in part on learning and adaptation within defined replication areas (PDAs), designed to maximize the extent and impact of this transformational logic.

This component includes two sub-components: (i) gender empowerment and knowledge management and (ii) monitoring and evaluation.

OUTCOME 4A: INCREASED TECHNICAL KNOWLEDGE AND DIFFUSION OF LDN AND CLIMATE CHANGE ADAPTATION STIMULATE UPTAKE OF EFFECTIVE, GENDER-BASED SOLUTIONS AT SUB-NATIONAL, NATIONAL AND INTERNATIONAL LEVELS

The above outcome will be delivered through a set of four inter-connected outputs, as follows:

- Output 4.1 will establish the gender-based parameters and goals of the project, and in particular its learning and replication efforts, by coordinating and monitoring a gender action plan that was developed during the PPG (see **Annex 8**). The action plan will ensure that both on-the-ground actions under Components 1-3, as well as learning, dissemination and replication efforts under the remainder of Component 4, are designed to leverage women's strategic role in climate change adaptation and natural resource management in order to effect desired change, while simultaneously enhancing that role and ensuring that important project benefits accrue to women.
- Output 4.2 will focus on the important monitoring issues associated with delivering on climate change informed LDN commitments. It will do so based on a participatory approach which will also serve to verify achievement of the project's own targets. Success in this area will offer an important stimulus to further climate change and LDN investments in the country.
- Output 4.3 will underpin and expand the project's learning and replication ambitions by integrating LDN and climate change adaptation for agricultural resilience within overall PDA-level monitoring. As a result, changes both within and beyond the specific project target areas will be measured, and adaptive actions will be identified to enhance and quicken uptake across each of the three target PDAs.
- Finally, under Output 4.4, a national-level communications and awareness program will be developed and implemented. As a result, project results and lessons learned will continue to radiate outwards—from target areas (components 1 and 2) to demonstration PDAs (Output 4.3)—to remaining PDAs in Benin and to the wider region as a whole.

The above-mentioned outputs are described in further detail below.

<u>Output 4.1:</u> Gender action plan is implemented and guides project implementation

A gender analysis and action plan are presented in **Annex 8**. As noted in the gender analysis, research in rural Benin has shown that women have less access to land and lower levels of land tenure security than men. These factors reduce women's willingness and ability to make longer-term investments, e.g. in the planting of valuable fruit trees, application of fertilizer and other investments in soil fertility, at a significant cost to society as a whole. In addition, women end up farming marginal plots of land due to lack of alternatives. These issues also make women and women headed households more vulnerable to climate change impacts. Strengthening skills and land tenure security of women would therefore help to increase both the long-term

sustainability and productivity of land and the incomes of women and female-headed households[75] there by enhancing their adaptive capacity.

As outlined in the gender action plan, the project will aim to address specific disadvantages facing women in Benin's rural society and to empower them to play a role equal to that of men in the sustainable development of the target areas and PDAs. This will include the following types of activities under the individual components:

- Supporting the roles and rights of women in policy and institutional work (Component 1).
- Involving women's groups in all stages of forest restoration and reforestation activities and increasing women's access to land through gender-sensitive land use plans and climate risk assessment, including the demarcation by local committees of fertile lands for use by women and women groups (Component 2).
- Strengthening the organization of women in informal groups, associations and cooperatives to increase their market access, position in climate-resilient value chains and control over revenues from agriculture, agroforestry and trade (Component 3).

Guidance documents that have been, and will continue being, used to guide the project's gender work include the CGIAR-CCAFS program's "Gender and Inclusion Toolbox: Participatory Research in Climate Change and Agriculture"[76], as well as the UNDP/FAO "Toolkit for value chain analysis and market development integrating climate resilience and gender responsiveness"[77]. These tools are essential for assessing the specific role and problems of women and for harmonizing proposed activities with specific local needs, both during the PPG and during the full project implementation. These efforts are also drawing on experiences from other projects such as the GEF Resilient Food Systems Impact Program[78].

While most activities identified in the gender action plan have been distributed across the relevant components and outputs, indicative activities under Output 4.1 include the following:

4.1.1 Raise awareness among project stakeholders regarding the goals, activities and objectives of the gender action plan

4.1.2 Monitoring and adaptive management of implementation of the gender action plan to ensure that it is meeting its objectives

75 Goldstein, Markus; Houngbedji, Kenneth; Kondylis, Florence; O'Sullivan, Michael; Selod, Harris. 2016. Securing Property Rights for Women and Men in Rural Benin. Gender Innovation Lab Policy Brief;No. 14. World Bank, Washington, DC. © World Bank. https://openknowledge.worldbank.org/handle/10986/25453 License: CC BY 3.0 IGO.

76 https://ccafs.cgiar.org/gender-and-inclusion-toolbox#.X4g2SNBKjIW

77 https://reliefweb.int/sites/reliefweb.int/files/resources/nap-ag_toolkit_for_value_chain_analysis_.pdf

78 http://www.resilientfoodsystems.co/news/for-women-in-benue-state-beekeeping-offers-an-avenue-for-income-and-independence

Output 4.2: Participatory M&E and quantification of LDN and CCA implementation—including restoration, SFM and SLM actions—as a contribution to national reporting under the UNFCC and other international commitments

Under Output 4.2, a participatory system will be tested in the three project PDAs for generating and managing data on climate hazards and impacts, restoration, SFM and SLM. In addition to contributing to UNCCD and UNFCCC reporting, this M&E data will also be useful for verifying that key quantitative project targets are being met. In parallel, changes in vulnerability and livelihood status will be monitored, thereby contributing to enhanced understanding of the relationship between degradation and livelihoods.

Indicative activities include the following:

4.2.1 Strengthen capacities, particularly among women and young people, to contribute to monitoring and evaluation of interventions for the sustainable and climate resilient management of land and forest ecosystems at the local, municipal and PDA levels (1, 2, and 5)

4.2.2 Pilot testing of a system of participatory monitoring, review and verification (MRV) of land and forest degradation, climate vulnerability and adaptation needs, potential risks and likely impacts.

4.2.3 Implement a system of monitoring changes in livelihood status and adaptive capacity for vulnerable people targeted

4.2.4 Obtain agreement between project stakeholders and sectoral decision makers at the national level on simple indicators, applicable to all sectors, linked to integrated, gender sensitive, sustainable responses to climate change

4.2.5 Produce reports estimating LDN implementation across the three PDAs, integrating data gathered by participatory and other means

Output 4.3: A learning and dissemination network developed and implemented in each of the three PDAs

On-the-ground actions and investments made by the project under Components 2 and 3 will be carefully monitored and periodically assessed from the point of impact, innovativeness, application of best practices and other factors in order to generate lessons that can be captured, learned and disseminated. An initial priority target for dissemination will be the remaining areas within the three project PDAs. PDA-level monitoring will assess the degree to which lessons / methods are being diffused and adopted throughout these wider landscapes. Awareness raising / training activities will be organized to disseminate technical aspects of the demonstrations. Behavioral and other barriers to diffusion of successful practices, and ways to overcome such barriers, will be identified as part of an iterative process aiming at stimulating broader PDA-wide transformations.

Indicative activities include the following:

4.3.1 Monitoring and assessment of project impacts and associated lessons emerging

4.3.2 Based on project results / demonstrations, develop and implement a training and dissemination plan aimed at women's groups and mixed farmers' organizations to support the further uptake of implementing technologies for the climate risk informed restoration of natural ecosystems, innovation in soil water conservation, etc.

4.3.3 Develop and disseminate technical guidance on adoption of climate resilient value chains integrating climate risks, to enhance productivity and climate resiliency of targeted value chains and agroforestry systems

4.3.4 Organize networking sessions to share experiences between the intervention municipalities on the one hand, and other municipalities within the three PDAs

4.3.5 Strengthen the capacities of women, young people and small producers in the management of digital tools (financial, digital education, e-commerce, etc.) for better climate resilience

4.3.6 Organize exchange trips / visits between PDAs and capacity building for the benefit of stakeholders on SLM/SFM

Output 4.4: National-level communications and public awareness program, incorporating lessons learned by the project, including through participatory M&E and gender empowerment, is developed and implemented at national, regional and international levels

Learning developed under output 4.3 will contribute to the development of a national-level communications and public awareness program. This effort will reach well beyond the direct circle of project beneficiaries and landscapes to encompass a broad swath of Benin society. It will also include a series of exchanges with a parallel UNDP-GEF project being implemented in neighbouring Togo.

Indicative activities include the following:

4.4.1 Develop a national information, education and communication (IEC) plan targeting all relevant actors, including, *inter alia*: (i) educational materials in order to increase knowledge and awareness among educators and to encourage teaching sessions in secondary schools and universities on Land Degradation Neutrality and climate change adaptation; (ii) an inclusive dialogue platform between scholars, customary and religious authorities, vulnerable groups and representatives of sectoral ministries around the inclusive management of natural ecosystems for climate resilience and LDN

4.4.2 Produce gender-sensitive communications and public awareness materials, e.g. leaflets, posters, flyers, brochures, summaries, videos, local radio spots, phone app, etc.)

4.4.3 Conduct briefings with target groups on project experience, as well as best practices and lessons learned, on topics such as gender and LDN, climate change resilience, etc.

4.4.4 Organize a series of physical and virtual exchanges—e.g. visits, workshops, knowledge products—with counterpart project team and stakeholders in neighboring Togo

OUTCOME 4B: PROJECT LEVEL MONITORING AND EVALUATION

The above outcome will be delivered through the following output:

Output 4.5: Project monitoring and evaluation is ensured

This output will ensure that project results are properly monitored throughout implementation through a performance framework, regular monitoring activities and evaluations.

Indicative activities include the following:

Activity 4.5.1. Project Inception Workshop

Activity 4.5.2. Implementation of Monitoring and Evaluation Framework for the Project

Activity 4.5.3. Mid-term review

Activity 4.5.4. Terminal evaluation

In the table below, **in bold**, are the activities that cannot start **until the ESIA/ESMP are in place**:

Component 1	**Indicative activities**
Output 1.1: **To be started while developing SESA**	1.1.1. Building on work done during PPG, complete detailed assessment of relevant equipment specifications, GIS and spatial analytic practices and capacity building requirements and provide targeted support to ensure effective participation in the process, particularly within DGEC under MCVDD
	1.1.2 Support and strengthen existing national networks for inter-sectoral data sharing on LDN, climate impacts, vulnerability and adaptation, e.g., REDD+ national coordination mechanism, National Committee for Climate Change, Technical Group for Land Degradation, land-use planning ministry and other sectoral ministries
	1.1.3 Assess and strengthen existing cartographic databases of land use, particularly agricultural uses, and associated land degradation and ecosystem services
	1.1.4 Support the development of improved national baseline maps indicating land and forest status, soil type and soil fertility, as tools for monitoring LDN (see also Activity 2.2.1)
	1.1.5 Build capacities for effective use of enhanced databases and maps
Output 1.2: **To be started while developing SESA**	1.2.1 Develop an observatory for monitoring agricultural dynamics, climate change impacts on agriculture and the vulnerability of forest ecosystems, including climate risks, including agreeing on indicators to be monitored
	1.2.2 Pilot testing in three PDAs of an operational system for monitoring agricultural dynamics and the vulnerability of forest ecosystems, based on existing and upgraded cartographic information
	1.2.3 Prepare two biennial national reports (2024 and 2026)
Output 1.3: **To be started while**	1.3.1 Analyze the structure, capacities and rules of operation of the two Committees and propose any recommended changes, especially an explicit mandate to address climate change vulnerability and adaptation assessments and policies and to integrate them with LDN and REDD+ mechanisms.

Component 1	Indicative activities
developing SESA	1.3.2 Support annual meetings of the two Committees, expanded as needed to cover CCA, at which a set of common objectives and a work plan for data sharing and other joint actions in support of integrated LDN, REDD+ and CCA policies and actions will be adopted.
	1.3.3 Strengthen the technical capacity of ministries and other government agencies through the development of strategy documents (e.g., REDD+ strategy, climate vulnerability assessments and adaptation action plans, regular review of land degradation policies and activities) to contribute to the objectives adopted by the Committees. **(Project will ensure findings of SESA on this activity are included in the Ethnic Groups Plan)**
Output 1.4: **To be started while developing SESA**	1.4.1. Develop guidelines for Federal and local Government financing of climate risk informed SLM, SFM and restoration efforts, and gender responsive climate resilient agriculture, including eligibility criteria for grant or loan financing
	1.4.2 Develop a program of climate risk informed SLM and SFM actions at national level with harmonized financing procedures and integration of environmental, economic and social aspects
	1.4.3 Insert an SLM budget line within the mechanism for transferring financial resources to municipalities
Output 1.5: **To be started while developing SESA**	1.5.1 Implement a training program for actors for key organizations, including DGEC under MCVDD, Directorate of Remote Sensing and Ecological Monitoring, National Geographic Institute, National Institute of Agricultural Resources, etc.
	1.5.2 Carry out multi-criteria climate change risk and SLM assessments, taking into account synergies and comparative advantages on the environment
	1.5.3 Provide necessary equipment to the National Geographic Institute and the Directorate of Remote Sensing and Ecological Monitoring to support their forest cover monitoring functions
	1.5.4 Provide capacity building support (equipment and training) to Ministries and research institutions to enable management of 'the databases'
	1.5.5 Implement training programs to access, interpret and use climate scenarios and vulnerability assessments, and especially to adapt them to local conditions through downscaling and through locally collected data based on observations and interviews

Component 2	Indicative activities
Output 2.1:	2.1.1 Build capacity for data collection on multiple climatic, biophysical and agro-ecological variables and participatory, scenario-based analysis to support local level planning for both climate change adaptation and land degradation neutrality. **(To be started while developing SESA)**
	2.1.2 Field-level, participatory, survey-based data collection within the eight target communes to support climate risk and LDN analyses **(To be started while developing SESA)**
	2.1.3 Work with the cartographic division of DGERC to integrate readily available, regional downscaled climate scenarios to create a spatially explicit dataset on climate hazards and map potential risks for land use and land cover change in the eight communes, where available use crop and plant habitat suitability models for common species, to inform SLM/SFM and land use planning, to inform the process for identifying climate resilient value chains with local participation (Component 3), and develop up to date and improved land use, land degradation, soil fertility, climate hazards and risks' informed zoning maps of the overall intervention area, i.e. eight target communes, together covering 2.2 million ha. **(To be started while developing SESA)**
	2.1.4 Conclude data sharing agreements amongst sectoral Ministries and national and local organisations **(To be started while developing SESA)**
	2.1.5 Develop LDN scenarios and LDN neutrality targets—based on a combination of sustainable land management and restoration actions and climatic hazards and non-climate risk analyses—and mainstream into

Component 2	Indicative activities
	emerging PDA Master Plans, with additional details for the participating communes **(To be started while developing SESA)**
	2.1.6 Support the incorporation of LDN and climate change aspects eight commune-level integrated, spatially explicit planning documents—"Schéma directeur d'aménagement de la commune" (SDAC) and "plan de développement communal" (PDC) - (To be started after ESIA and ESMP)
	2.1.7 Build validated, multi-dimensional local plans that are aligned with existing SDACs and PDCs, and that can be easily integrated within the SDACs and PDCs, supported by recognized local governance structure **(To be started during ESIA and ESMP)**
	2.1.8 Mainstream climate change hazards, risks and adaptation options SLM and SFM into eight commune-level Land Management Plans (PIGUS), including capacity-building strategies (To be started after ESIA and ESMP)
	2.1.9 Conduct climate risk assessments for ecosystem based adaptation[79] using the climate hazards dataset (2.1.1), integrate relevant modeled outputs from GEF-CI SPARC and participatory input from communities to identify cost effective and locally relevant adaptation measures in order to update management plans for the classified forests of Sota, Mékrou and Kouandé to include climate change scenarios and adaptation measures and sustainable land management, in line with commune-level plans, along with soil conservation and LDN plans for the classified forests of Alibori Supérieur and Trois Rivières (To be started after ESIA and ESMP)
Output 2.2:	2.2.1 Identify exact locations for land and forest restoration and sustainable management, building on PPG site selection process and incorporating additional mapping work undertaken under 2.1.1, as well as nature of restoration or SLM/ SFM approach. Site selection will take into consideration climate risks (risk maps produced under 2.1.1) and opportunities to reduce them (e.g. by restoring erosion prone slopes and riparian forests), based on climate hazard maps and risk models. **(To be started during ESIA and ESMP)**
	2.2.2 Provide extension and material support (e.g., equipment, seedlings, compost and other inputs) for conservation and improvement / restoration of cropland and conservation of soil fertility in identified priority locations (see 2.2.1) and in line with plans developed under activities 2.1.2 - 2.1.4 above (To be started after ESIA and ESMP)
	2.2.3 Provide extension and material support (e.g. equipment, seedlings and materials for the plant nurseries) for conservation and improvement / restoration of forest areas and conservation of soil fertility in identified priority locations (see 2.2.1) and in line with plans developed under activities 2.1.5 and 2.1.6 above, including enriching and developing protection series / green belt in the classified forests of Alibori Supérieur, Trois Rivers, Sota, Mékrou and Kouandé with versatile forest species with high tolerance to droughts and floods. (To be started after ESIA and ESMP)
	2.2.4 Protect the banks of the Ouémé, Zou and Couffo river basins against erosion through reforestation of 1,000 hectares of riparian forest using native species with high tolerance to drought and floods, in line with plans developed under Activities 2.1.5 and 2.1.6 (To be started after ESIA and ESMP)
	2.2.5 Establish multi-purpose water reservoirs to facilitate access to clean water (particularly for select water-saving crops and value chains), by, and avoid conflict among, agricultural producers, livestock breeders and migrant and other vulnerable populations **(To be started after ESIA and ESMP)**
Output 2.3: **To be started during SESA**	2.3.1 Development of capacity building modules and materials, based on international experience, with specific adaptations for conditions in Benin as well as further specifications by PDA, covering: (i) integration of SFM, SLM in projects, business plans, laws and sector strategies; (ii) soil fertilization technologies; (iii) technologies for restoring degraded lands; (iv) approaches to maintaining soil fertility and respecting degradation neutrality standards; (v) Climate vulnerability and risk assessments through a combination of use of climate scenarios and local experiences and observations to inform the selection of locally relevant adaptation measures including

[79] Using, for example, the GIZ – UNU guidance to practitioners (2018).

Component 2	Indicative activities
	selection of crop and tree species and varieties, planting dates, soil management practices to increase water availability to crops (e.g. mulching), irrigation practices, crop diversification, provision of climate resilient crop varieties, etc. (vi) methods of soil water conservation, (vii) safeguarding farms against risks (infestations, flooding, bush and vegetation fires, etc.); (viii) protection of forests against brush fires; (ix) cultivation technologies and fodder storage; (x) approaches and standards for forest management and the establishment of carbon sinks and protective belts; (xi) techniques for collecting and processing agricultural and forestry seeds; (xii) approaches and production methods of agricultural and forestry plants in a context of climate change, etc.
	2.3.2 Delivery of training modules and materials to at least 1,000 national and local government and administration officials (including ATDAs, DGEC under MCVDD and DGEFC), parliamentarians and private sector representatives
	2.3.3 Awareness raising seminars, workshops and information materials provided to decision-makers and other officials
Output 2.4:	**2.4.1. Through a participatory process including stakeholder mapping, the participatory mapping of climate hazards and risks, and land degradation vulnerability as perceived locally in combination with available data, identify local priorities and action plans for the promotion of climate resilient and degradation neutral agricultural, livestock and agroforestry practices and organize user groups (including women and youth groups) for each identified activity. (To be started after ESIA and ESMP)**
	2.4.2. Implement intensive training and extension programs in the pilot communities, led by local NGOs in partnership with community-based groups and under the guidance and supervision of government extension services. Considering the high number of illiterate people (especially women) in the rural population especially in the north of the country, extension methods will rely on face-to-face meetings rather than printed communication tools or social media. (To be started after ESIA and ESMP)
	2.4.3. Develop radio programs on a range of climate change and land degradation topics, identified by a local advisory committee, and emit them in the most common local languages. (To be started after ESIA and ESMP)
	2.4.4. Provide local groups with the essential tools and inputs for climate resilient agriculture and land restoration, such as farm tools, supplies for village nurseries, seedlings, etc. (To be started after ESIA and ESMP)
Output 2.5:	2.5.1. Disseminate existing technical guidance materials developed by other initiatives (e.g. PROSOL) relating to "Integrated management of soil fertility", "soil and water conservation", "conservation agriculture" and "agroforestry and individual forests" **(To be started during SESA)**
	2.5.2. Establish at least 200 ha of commercial plantations (150 ha of forest species and 50 ha of forage species) (To be started after ESIA and ESMP)
	2.5.3. Support local communities to establish at least 100 ha of communal and individual fruit plantations (To be started after ESIA and ESMP)
	2.5.4 Promote arboriculture as well as the vegetated delineation based on palm trees (rônier), néré and shea trees, which are all highly resilient to climate variability and drought and even support occasional fire, as a means of diversifying farming systems thereby reducing risks related to a largely unpredictable climate future. (To be started after ESIA and ESMP)
	2.5.5. Promote nurseries for fertilizing plants (e.g. mucuna, pigeon pea (cajanus cajan); and Vigna radiata for the restoration of degraded agricultural sites (noting that pigeon pea has been used in the West African savanna for many years and is noteworthy for its positive influence on associated food crops (e.g. maize) as well as a producer of edible seeds and fodder. (To be started after ESIA and ESMP)

Component 3	Indicative activities
Output 3.1.	**3.1.1 Map the short-listed value chains (To be started during SESA)**

Component 3	Indicative activities
	3.1.2 Undertake surveys within potential beneficiary communities to assess preferences among alternative climate resilient value short-listed chains (To be started during ESIA and ESMP)
	3.1.3 Select five priority value chains, based on pre-determined selection criteria and with reference to PDAs (To be started after ESIA and ESMP)
	3.1.4 Prepare five value chain analyses, including priority measures needed to strengthen climate resilience. These should include, inter alia: (i) good practices and associated technologies for the storage / conservation and processing of various products (plants, animals, fisheries and forestry, etc.); (ii) the potential contribution of each product / value chain in terms of climate resilience, zero degradation or restorative production and gender-balanced income generation; (iii) specific barriers and opportunities associated with each value chain (To be started after ESIA and ESMP); (iv) climate change impact assessment across all priority value chains to identify the adaptation measures to reduce risks of climate related losses and damages
	3.1.5 Develop an action plan for strengthening each value chain (To be started after ESIA and ESMP)
Output 3.2:	**3.2.1 Deliver training to strengthen agricultural skills related to the selected products, including: (i) techniques for managing soil fertility and (ii) climate-resilient agricultural practices (To be started after ESIA and ESMP)**
	3.2.2 Improve access to information and to appropriate post-harvest processing and storage equipment and infrastructure, at different levels of the marketing chain, to help processors better respond to quantitative and qualitative aspects of market demand (To be started after ESIA and ESMP)
	3.2.3 Contribute to the sustainable intensification of production in the selected sectors by supporting the adoption of improved technologies adapted to the needs of farmers, in particular women, and enabling them to better respond to market signals (To be started after ESIA and ESMP)
	3.2.4 Support efforts by cooperatives to strengthen crop processing and storage (To be started after ESIA and ESMP)
Output 3.3:	**3.3.1 Develop partnership with micro-financing institutions to increase the flow of financial services (campaign credit, equipment credit, etc.) to encourage adoption of SLM and SFM practices. The project will work with commercial credit institutes and government on the possibility of designing standardized loan packages for communities and cooperatives engaged in climate-resilient and degradation neutral activities such as certain agroforestry value chains, small livestock production, etc. that would be accompanied by extension services to reduce the risks of default. (To be started after ESIA and ESMP)**
	3.3.2 Establish partnerships with local communities, NGOs, forest department directorates, and ATDAs to train farmers and ranchers (particularly women), in climate resilient agriculture. This activity would focus on the creation and strengthening of land user, processor and trader groups and cooperatives that would work under the supervision and with the support of the responsible government agencies (e.g. forestry) and civil society organizations, thereby increasing their access to credit, technical support and markets, and reducing risks for individuals and families engaged in agricultural and forestry production, processing and trade. This would also include the organization of savings groups within communities to cover smaller investment needs or complement external loans. (To be started after ESIA and ESMP)
	3.3.3 Initiate a national dialogue (Government, financial sector, NGOs) on de-risking mechanisms to provide loan guarantees for micro-projects for land degradation neutral (or regenerative) and climate resilient income-generating opportunities. This would build on climate risk assessments of value chains to identify relatively low-risk land use options and would engage with national and local governments, the private sector and civil society organizations active in the area on the possibility of creating partial guarantees for loans and investments in degradation-neutral and climate-resilient land uses and value chains. This discussion is rather new in Benin and therefore the immediate objective of the project would be to create a discussion forum for de-risking needs and potential mechanisms and sensitize government and other actors for the issues involved. (To be started after ESIA and ESMP)

Component 3	Indicative activities
Output 3.4:	**3.4.1 Develop market research and feasibility assessment for new products based on the "Market Analysis and Development (ADM)" approach and in consultation with potential beneficiaries (To be started after ESIA and ESMP)**
	3.4.2 Organize initial meetings between buyers and sellers, and trade shows and exchange trips in the West and Central African sub region and / or support the participation of local producer groups (including cooperatives) in such meetings (To be started after ESIA and ESMP)
	3.4.3 Support improved packaging and delivery of new products to market (To be started after ESIA and ESMP)
	3.4.4 Support identification of new business partners for SMEs (To be started after ESIA and ESMP)

Component 4	Indicative activities
Output 4.1 **To be started while developing SESA**	4.1.1 Raise awareness among project stakeholders regarding the goals, activities and objectives of the gender action plan
	4.1.2 Monitoring and adaptive management of implementation of the gender action plan to ensure that it is meeting its objectives
Output 4.2: **To be started while developing SESA**	4.2.1 Strengthen capacities, particularly among women and young people, to contribute to monitoring and evaluation of interventions for the sustainable and climate resilient management of land and forest ecosystems at the local, municipal and PDA levels (1, 2, and 5)
	4.2.2 Pilot testing of a system of participatory monitoring, review and verification (MRV) of land and forest degradation, climate vulnerability and adaptation needs, potential risks and likely impacts.
	4.2.3 Implement a system of monitoring changes in livelihood status and adaptive capacity for vulnerable people targeted
	4.2.4 Obtain agreement between project stakeholders and sectoral decision makers at the national level on simple indicators, applicable to all sectors, linked to integrated, gender sensitive, sustainable responses to climate change
	4.2.5 Produce reports estimating LDN implementation across the three PDAs, integrating data gathered by participatory and other means
Output 4.3	4.3.1 Monitoring and assessment of project impacts and associated lessons emerging (**To be started while during SESA)**
	4.3.2 Based on project results / demonstrations, develop and implement a training and dissemination plan aimed at women's groups and mixed farmers' organizations to support the further uptake of implementing technologies for the restoration of natural ecosystems, innovation in soil water conservation, etc. (**To be started while during SESA)**
	4.3.3 Develop and disseminate technical guidance on adoption of climate resilient value chains integrating climate risks, to enhance productivity and climate resiliency of targeted value chains and agroforestry systems (**To be started while during SESA)**
	4.3.4 Organize networking sessions to share experiences between the intervention municipalities on the one hand, and other municipalities within the three PDAs (To be started after ESIA and ESMP)
	4.3.5 Strengthen the capacities of women, young people and small producers in the management of digital tools (financial, digital education, e-commerce, etc.) for better climate resilience (To be started after ESIA and ESMP)

Component 4	Indicative activities
	4.3.6 Organize exchange trips / visits between PDAs and capacity building for the benefit of stakeholders on SLM/SFM (To be started after ESIA and ESMP)
Output 4.4	**4.4.1 Develop a national information, education and communication (IEC) plan targeting all relevant actors, including, inter alia: (i) educational materials in order to increase knowledge and awareness among educators and to encourage teaching sessions in secondary schools and universities on Land Degradation Neutrality and climate change adaptation; (ii) an inclusive dialogue platform between scholars, customary and religious authorities, vulnerable groups and representatives of sectoral ministries around the inclusive management of natural ecosystems for climate resilience and LDN (To be started after ESIA and ESMP)**
	4.4.2 Produce gender-sensitive communications and public awareness materials, e.g. leaflets, posters, flyers, brochures, summaries, videos, local radio spots, phone app, etc.) (To be started after ESIA and ESMP)
	4.4.3 Conduct briefings with target groups on project experience, as well as best practices and lessons learned, on topics such as gender and LDN, climate change resilience, etc (To be started after ESIA and ESMP)
	4.4.4 Organize a series of physical and virtual exchanges—e.g. visits, workshops, knowledge products—with counterpart project team and stakeholders in neighboring Togo (To be started after ESIA and ESMP)

Partnerships:

Benin is currently implementing a number of projects in the agricultural and sustainable land and forest management sectors, several of which include climate change adaptation elements (see **Table 4** above).. The GEF project will establish partnerships with each of these projects in order to create synergies and complementarities The GEF project will build on the lessons being learned by these projects. It will also use the frameworks established by these projects and reach out to actors already trained in climate change adaptation, land and ecosystem management by these projects.

The project will aim to create strong linkages between these different initiatives at the national and local levels and ensure that project interventions complement the ongoing work of these partners. Organized actors in the project intervention landscapes will contribute to implementation of project activities. These organizations include platforms for exchange and collaboration for the implementation of various projects.

Lessons learned such as: (1) consultation with other ministries implementing other projects related to the concerns of the populations and SLM/SFM, (ii) strengthening follow-up activities for capacity building initiatives to ensure the sustainability of actions and equipment made available to communities, and (iii) strengthening the involvement of communes/municipalities for the sustainability of actions to be implemented in the GEF project intervention zones, will enhance the effectiveness of project implementation

Study and learning trips will be organized to the sites of partner projects to help with the short-listing and selection of climate resilient and degradation netutral value chains and to master techniques that have already proven themselves in the field. Where appropriate, specialists from these projects will be provided with additional, targeted training.

Relevant support is being provided to the Government of Benin by a number of donor and development agencies (see **Tables 11** and **12** below). The project will work closely will all partners to ensure achievement of the overall project objective

Table 11: Partnerships

Co-financing source	Co-financing type	Co-financing amount	Included in project results?
Government	Grants	43, 000,000	No
Government	Cash	1,000,000	No
Government	In-kind	1,400,000	No
UNDP	TRAC	480,000	No
UNDP	In-kind	800,000	No
NGO ALDIPE	In-Kind	181,335	No
NGO ALDIPE	Grants	234,913	No
NGO CAPES	In-kind	93,750	No
NGO CAPES	Grants	100,000	No
NGO API Service Monde	In-Kind	30,700	No
NGO API Service Monde	Grants	5,250	No
NGO DEDRAS	In-Kind	600,000	No
NGO DEDRAS	Grants	330,000	No
NGO APIC	In-Kind	16,667	No

Risks*:*

An effective strategy for risk management has been developed (see **Annex 6**). A total of 23 risks have been identified and rated in terms of impact and probability. They are presented in the project's Risk Register (see Annex 6). These risks fall into three relatively distinct categories, as follows:

- *Social and environmental risks (#1-11 in risk register)*: 11 social and environmental risks have been identified and assessed through UNDP's Social and Environmental Screening Procedure (SESP) (see Annex 5). The following risks have been rated as "Substantial":
    - Risk #1 – Local communities, especially farmers and vulnerable people, such as women or marginalized indigenous peoples, may not be adequately involved on integrated land use, landscape restoration, and forest management plans (outputs 2.1 and 2.2) and therefore not fully engaged in and not benefit fully from project activities
    - Risk #2 - Access to economic resources and natural resources facilitated through interventions under outputs 2.4 and 3.2 could create or exacerbate conflicts between ethnic groups or could increase the risk of violence between project-affected communities and individuals.

- Risk #3 - New approaches to land management, as planned under output 2.1, could result in changes to current access to resources in each PDA and could potentially lead to economic displacement.

The above social and environmental risks, along with eight additional "Moderate risks" have been assessed, with appropriate management measures designed and risk owner identified (see Annexes 5 and 6).

- *Miscellaneous risks associated with theory of change assumptions (#12-18 in risk register)*: Seven moderate risks to effective project implementation have been identified, deriving from assumptions presented in the project's theory of change. Risk owners and management measures are indicated.
- *Risks associated with COVID-19 (#19-23 in risk register)*: Finally, five moderate risks associated with COVID-19 have been identified, together with management measures and risk owners.

Project development has been informed through consultations with a broad cross section of national stakeholders and thorough analysis of national and local circumstances, both of which have contributed to its analysis of risk and of risk mitigating measures. Project developers have elaborated two action plans to manage and mitigate the cumulative nature of the risks and/or the complexity of assessing and managing the moderate risks identified in the SESP. These are: (1) Stakeholder Engagement Plan, and (2) Gender Action Plan. An Ethnic Groups Planning Framework (as IPPF) has been developed, as an Annex to the Environmental and Social Management Framework (ESMF), to inform the Ethnic Group Plans (as Indigenous People Plan-IPP) that will be developed within the first project year. The IPPF identify how key activities will be designed to obtain the FPIC of local communities during the project's inception phase.

Planned assessments and plans, identified through the SESP, are listed in the above section "Results and partnerships".

A Gender/ Safeguards Officer will be included in the PMU and an independent safeguards expert (consultant) will be hired to develop the planned assessments and the planned management plans. The SESP will be updated annually during the PIR.

Finally, the Project will develop a project-level Grievance Redress Mechanism (GRM) that is proportional, culturally appropriate, accessible, and transparent, and that ensures appropriate protection for claimants, and the Project also will inform the stakeholders about the existence of the mechanism and how to use it. The GRM will include an early warning system, helping to identify problems and close gaps in a timely and cost-effective manner, avoiding escalation into more entrenched or complex disputes. The GRM will be executed through the implementing partner. As needed or as requested, UNDP will be available to help the implementing partner to address project-related grievances as part of its oversight and assurance roles.

Table 11: COVID-related opportunities

Opportunity Category	Potential	Project Plans

Can the project do more to protect and restore natural systems and their ecological functionality?	High	The project has been designed to ensure the long-term integrity, conservation and sustainable use of its target landscape and its ecosystem functions. Reducing encroachment of human land uses and fragmentation of ecosystems will also contribute to reducing the risk of future zoonosis.
Can the project regulate the consumption and trade of wildlife?	High	Hunting is not a major activity in the area. However, the project will attempt to reduce unregulated hunting and trade of wildlife / wild meat in the target area by strengthening the management of protected areas and promoting alternatives to hunting, such as small livestock.
Can the project include a focus on production landscapes and land use practices within them to decrease the risk of human/nature conflicts?	High	The project focuses on the rural landscape of Benin as a mosaic of protected areas and the adjacent production landscape. Its objective is to ensure the sustainable management of both protected and agricultural areas. A key objective is to reduce or prevent the encroachment of human land uses (agriculture, pastoralism) into protected areas and remnant forests which results in their fragmentation and increased risk of human-wildlife conflicts with increased risk of disease exposure.
Can the project promote circular solutions to reduce unsustainable resource extraction and environmental degradation?	High	The project will ensure sustainable procurement, careful waste management, avoidance of contribution to POPs (eg by reducing the use of pesticides including unauthorized ones in cotton production) and GHG emissions (through forest conservation and restoration). Landscape planning will contribute to recovery of the natural vegetation and enhanced landscape connectivity and carbon storage in vegetation and soil.
Short-term opportunity to support Covid economic recovery	High	The promotion of sustainable agriculture, agroforestry and use of non-timber forest products in and around the target landscapes, as well as sustainable tourism in the protected areas, will all contribute to income generation and the recovery of the local economy. All alternative livelihoods activities are intended towards green growth models and a circular economy by focusing on business models and land uses that incorporate climate, biodiversity and sustainability.
Can the project innovate in climate change mitigation and engaging with the private sector?	High	A large part of the project involves working with local communities to mainstream climate mitigation and adaptation into their land uses. Under the agroforestry and forest regeneration aspects, increased carbon sequestration on formerly degraded lands will increase climate mitigation.

<u>Stakeholder engagement and south-south cooperation:</u>

The project put a strong focus on community and stakeholder engagement throughout project design, and this will continue throughout implementation.

Engagement with project stakeholders, including ethnic groups at project sites, commenced during the project development phase. In addition to consultations conducted with Cotonou-based stakeholders, meaningful, effective and informed consultations, following FPIC approach, were conducted in the project landscapes. These activities were led by a socio-economist with a deep understanding of local contexts and communities, to both gather views and concerns of stakeholders and facilitate their full contribution to project design. The consultations carried out during the PPG enabled active local community engagement and participation in decision-making.

Communities were consulted during the PPG phase using a Free Prior and Informed Consent (FPIC) approach. Such meaningful engagement will continue during the implementation phase. The engagement process will take into consideration the rights of Ethnic Groups and the disadvantages faced by them, linked to vulnerabilities, such as limited access to education, low literacy levels, negative stereo-typing and inadequate understanding of national or site-specific policy and programming processes. Where necessary, civil society organizations representing and deemed acceptable by ethnic groups will also be engaged to provide additional support.

Based on the detailed stakeholder analyses that took place during project design, a comprehensive Stakeholder Engagement Plan (SEP) (see Annex 8) has been developed and will be implemented during the full project, aimed at actively involving all relevant groups through targeted communication and outreach efforts with the aim to increase awareness about the intended project outcomes and benefits, and to mobilize buy-in and support for project implementation. The SEP includes a Grievance Redress Mechanism (GRM) that will be activated in case any concerns are raised by partners or beneficiaries about human rights infringements, adverse socio-economic or environmental impacts directly or indirectly attributed to project implementation. All concerns will be assessed, documented, and followed up with appropriate responses in order to address the issue.

A stakeholder engagement plan is attached as **Annex 8**. Here below, Stakeholder groups and key actions are summarized:

Farmers	Individuals and groups consultation during project inception phase and along project implementation. Disclosure of assessment and management plans. Collection of feedback.
Livestock farmers	Individuals and groups consultation during project inception phase and along project implementation. Disclosure of assessment and management plans. Collection of feedback.
Traders	Sharing Information with individuals and groups during project inception phase. Collection of feedback based on the M&E plan.
Women/women groups	Individuals and groups consultation during project inception phase and during project implementation. Disclosure of assessment and management plans. Collection of feedback.
Youths/Youths groups	Individuals and groups consultation during project inception phase and during project implementation. Disclosure of assessment and management plans. Collection of feedback.
Men/head of Household	Individuals and groups consultation during project inception phase and during project implementation. Disclosure of assessment and management plans. Collection of feedback.

Migrants/Displaced peoples	Individuals and groups consultation during project inception phase and during project implementation. Disclosure of assessment and management plans. Collection of feedback.
Landowners	Individuals and groups consultation during project inception phase and during project implementation. Disclosure of assessment and management plans. Collection of feedback.
Livestock owners	Individuals and groups consultation during project inception phase and during project implementation. Disclosure of assessment and management plans. Collection of feedback.
Benin Government agencies	Individuals and groups consultation during project inception phase and during project implementation. Disclosure of assessment and management plans. Collection of feedback.
Benin local authorities	Individuals and groups consultation during project inception phase and during project implementation. Disclosure of assessment and management plans. Collection of feedback.
Other Government (bordering with Benin)	Keeping them informed for any aspects that can affect borders areas
Contractors and subcontractors	Sharing Information with individuals and groups during project inception phase.
Private sector	Individuals and groups consultation during project inception phase and during project implementation. Disclosure of assessment and management plans. Collection of feedback.
Consumers of goods (agricultural products, others)	Individuals and groups consultation during project inception phase and during project implementation. Disclosure of assessment and management plans. Collection of feedback.
Donors agencies	Consultation during project inception phase and during project implementation. Disclosure of assessment and management plans. Collection of feedback.
UNDP	Consultation during project inception phase and during project implementation. Disclosure of assessment and management plans. Collection of feedback.
Universities and Research Institutions	Consultation during project inception phase and during project implementation. Disclosure of assessment and management plans. Collection of feedback.
Agricultural extension agencies	Consultation during project inception phase and during project implementation. Disclosure of assessment and management plans. Collection of feedback.
CSOs (Civil Society Organizations) and CBOs (Community Based Organizations)	Consultation during project inception phase and during project implementation. Disclosure of assessment and management plans. Collection of feedback.
National Associations	Consultation during project inception phase and during project implementation. Disclosure of assessment and management plans. Collection of feedback.

Here below the main Ethnic Groups present in the project areas, as per 2013 Census:

- Fon and related groups
- Adja and related groups
- Yoruba and related groups
- Bariba and related groups
- Peul and related groups
- Gua / Ottamari and related groups
- Yoa-Lokpa and related groups
- Dendi and related groups

FPIC will be required for Ethnic Groups who will be identified through ESIA as minorities in each PDA.

FPIC is requested for outputs/activities listed in the Ethnic Groups Planning Framework (as IPPF), Annex 1 of the ESMF (ProDoc Annex 9)

If any partnerships are to be struck with private sector partners, UNDP's Private Sector Partnership Due Diligence Screening will be completed before any agreements are entered into.

South-South co-operation will include coordinated lesson learning, study tours and other communications with a UNDP-GEF-8 project expected to begin in neighboring Togo in 2022.

Gender equality and women's empowerment:

A Gender Analysis and Action Plan are attached as **Annex 10**. The project takes into account that, despite improvement in the political and strategic framework for mainstreaming gender-related issues into development decisions and actions in Benin, women's unequal access to land, inputs, equipment, and credit, economic and social opportunities remain limited compared to men. The project has been designed specifically to ensure that it maximises opportunities to contribute to gender equality, including through dedicated activities described under Component 4. In line with UNDP and GEF policies on mainstreaming gender into project design and implementation, a gender gap analysis has been conducted during project preparation, and a detailed action plan with associated indicators was developed to ensure that the design takes into full consideration gender-related dynamics and opportunities in the Benin context.

Key elements of the Gender Action plan are listed here below:

Actions	Results areas – Gender equality	Addressed barriers
Component 1:		
Creation of a centralized national NDT database created within the DGEC under MCVDD with a link to global monitoring of restoration and NDT by gender	Improving women participation in decision-making process. Closing gender gaps in access to land and natural resources.	Participation of women in decision-making bodies at national and local level Ability to react in risk situations
Creation of a national gender-integrated monitoring system to monitor vulnerability to climate change in the agricultural sector and changes in adaptive capacity, land cover change, degradation, restoration and forest ecosystems, and ecosystem services		
Creation of a national committee integrating women producers, young people and migrants from the target areas of the project to combat desertification with a view to better ownership and capacity of national authorities to face the expected scenarios of hazards and sensitivity to climate change		
Integrate gender into the harmonized programs of the National Forestry Development Fund, the National Environment and Climate Fund and the National Agricultural Development Fund integrating the objectives of ACC and NDT, strengthened governance mechanisms and resource mobilization capacity		

Actions	Results areas – Gender equality	Addressed barriers
Component 2:		
Integrated gender-integrated land use, landscape restoration and forest management plans are developed, with climate change scenarios informing the risks and selection of adaptation options, and operationalized at target sites, with the implementation capacity	Closing gender gaps in access to land and natural resources Generating socio-economic benefits and/or services for women.	Access to land and natural resources
Identify and integrated degraded lands belonging to poor and socially excluded households headed by women in the 15,000 hectares of degraded land and 15,000 hectares of forest that will be subject to climate change resilient restoration practices and sustainable management		
Advocate with national and local government and administrative officials (including ATDAs, DGEC under MCVDD and DGEFC), parliamentarians and private sector representatives on climate-resilient and degradation-neutral planning and policies for gender mainstreaming to that half of the 1,000 participants in awareness-raising and training are women concerned		
Component 3:		
Integrate gender in the analysis of agricultural value chains according to their potential for climate resilience, land management without degradation, sustainable income generation for rural communities with a particular focus on women, and on this basis, these value chains to be strengthened through additional investments and extension support	Closing gender gaps in access to land and natural resources Generating socio-economic benefits and/or services for women.	Access to land and natural resources
Improve market access for women farmers, farmers and communities practicing climate-resistant and non-degradation agriculture and agroforestry, including NTFPs, through strengthening cooperatives and farmers' organizations and partnerships negotiated with traders, traders, processors		
Organize advocacy for gender mainstreaming in technical guidance on adopting resilient value chains to improve productivity and climate resilience of targeted value chains and agroforestry systems.		
Component 4:		
Design a women's empowerment strategy to guide the implementation of the project.	Improving women participation in decision-making process.	Participation of women in decision-making bodies at national and local level Ability to react in risk situations
Endow the project with a gender and women's empowerment unit		
Develop and implement a gender disaggregated participatory monitoring plan for land under improved management and restoration, and a framework for learning about project sites.		

Innovativeness, Sustainability and Potential for Scaling Up:

Innovation: The project is innovative in a the following ways:

- It will bring together a number of different Government agencies, supported by their development partners, to design and implement climate-resilient agriculture and agroforestry, participatory forest management, land restoration, and sustainable agricultural production, all of which will be integrated through the framework of **integrated land use planning**. Most importantly, the project will work with government agencies at national and local level as well as community-based organizations and SMEs to ensure that land use plans integrating LDN and CCA into agricultural and forestry development are effectively implemented on the ground. This need to build the **capacity and institutional structures to ensure the effective and timely implementation** of interdisciplinary, interagency and inter-ministerial development plans combining LDN, CCA, agriculture and small business development has been specifically pointed out by government stakeholders during the project design. It goes beyond the (already complex) tasks of participatory and integrated land use planning (integrating climate change scenarios) into the complexities of budgeting for and operationalizing workplans that fall across institutional responsibilities and requires close coordination at various levels for their effective implementation. The timing of the project is ideal, as Benin is adopting a new Integrated Land Use Planning Policy and has recently set up structures to increase Government capacity and civil society participation to undertake spatial planning for development across local, district and national levels, integrating climate change adaptation planning, and there is a clearly expressed demand for the effective implementation of existing and forthcoming plans. The project aims to develop innovative partnerships at district level for enhanced spatial management and strengthened natural resource management through implementation of various management tools, such as the Master Town Planning, Forest Management Plan, Land Sub-division Plan, etc.

- The project also takes an innovative approach to the challenge of climate resilient agricultural input supply – promoting a small business development approach to supplying farmers with critical inputs for enhancing productivity and enabling sustainable intensification, whilst simultaneously avoiding the spread of the agricultural footprint further into the forest, or even restoring forest cover at critical locations as an insurance against ecosystem service failure (e.g. soil erosion, flooding, or the seasonal drying out of wells and water courses as too much rain water is lost as runoff).

- GEF investment will provide hands-on technical assistance for the first three years of each income generating activity as it becomes established. Such businesses will be based on market analysis and will supply needed agroforestry / farming inputs, e.g., improved climate resilient seeds, weeding tools, vermicompost start-up, compostable seedling bags.

- Specific innovation with regard to gender is the inclusion of targeted capacity development for women farmers and product developers such as Shea butter from Shea trees, baobab products, which will provide women farmers and female headed households with the ability to participate fully in agricultural extension support

programmes for tree crop cultivation, as well as for livestock farming, agroforestry, and citrus, cashew and mango plantations. Participating farmer groups and small businesses will be sensitized to the need and approaches to analyze crops and related value chains according to their vulnerability to land degradation and climate change, thereby enabling the selection of less vulnerable approaches to farming and local business development. Tree and crop species that have shown high resilience to climate variability and change and that are well adapted to the often low fertility of savanna soils, while having well-developed local markets, such as shea, néré and baobab, will be given priority.

- Awareness raising and advocacy efforts through the project will use a wide range of available media and approaches – including local radio, if necessary, in a range of languages and using techniques that are well-adapted to the local culture, such as dialogues and songs, as well as mobile phone applications and messaging services, and exploring use of indigenous folk media forms (eg theater).

Sustainability: The Government of Benin aims to mainstream LDN across different sectors in order to achieve its ambitious LDN targets. Building on experience of previous UNDP-GEF projects in Benin, this project will maximize opportunities for sustaining the gains of the project in the long term while also integrating a climate change risk informed lens into the identification and selection of efforts to achieve LDN targets. This will be achieved by ensuring that there is thorough buy-in and adoption of the project by Government, stakeholders and beneficiaries in order to improve and strengthen ownership of the project. Means by which sustainability post-project can be achieved will be evaluated during the project development phase. The maintenance of infrastructure for newly established small income generating opportunities will be addressed through business planning efforts and the overall sustainability will be promoted through provision of support services, including carrying out value chain analyses and market studies, and providing technical training and business planning.

Sustainability will be further strengthened through effective and equitable governance based on stakeholder engagement strategies and a stakeholder engagement plan that maps out different social characteristics (e.g. power, political and cultural dimensions, gender). As important elements in building sustainability, stakeholders will be mapped in relationt to the Theory of Change, in order to anticipate their role in the phases of project implementation, and to anticipate whether barriers could exist for their engagement (e.g. levels of literacy, cultural barriers). A strong focus will be on engaging with youth beyond merely 'consulting' and awareness raising.

Scaling up: Scale-up will be achieved through a new approach to building partnerships for agricultural extension, working closely with the Territorial Agencies for Agricultural Development to integrate climate risk, vulnerability and adaptation options in decision-making, and the various producer Unions, to bring in private sector partnerships with an interest in investing to build climate resilience in their supply chains, especially in the specialty organic cotton, citrus, cashew and mango, and other tree crop sectors. Scale-up of adoption of climate

resilient value chains and agricultural practices will occur through the existing platforms, integration of lessons with the Scale-up of climate risk informed participatory forest management activities as part of fulfilling the restoration objectives set out in the Forest Sector Development Plan, will be addressed through investigating the feasibility of various financial incentives. Scale-up of project learning to other regions of Benin will also be addressed through Component 4 of the project, which includes holding annual dialogue and information sharing events with beneficiaries and stakeholders operating not only in different sectors, but also in different Departments across Benin. Project learning will also be shared with other GEF-funded projects addressing farming and forestry practices, particularly the Project ID 9383 "Sustainable Forest Management and Conservation Project in central and south Benin (Departments of Borgou and Donga)" being implemented by AfDB.

Careful attention will be paid to identifying stakeholders that are essential for achieving long-term impacts and scaling. In terms of scaling, the project will take into consideration the suggested lessons from Buttler et al (2020)[80]. Spatial land use planning and spatial prioritization will be included in the planning of interventions.

[80] Butler James R. A., Rochester Wayne, Skewes Tim D., Wise Russell M., Bohensky Erin L., Katzfey Jack, Kirono Dewi G. C., Peterson Nate, Suadnya Wayan, Yanuartati Y., Handayani Tarningsih, Habibi Putrawan, Jaya I Komang Damar, Sutaryono Yusuf, Masike-Liri Barbara, Vaghelo Desmond, Duggan Kate. How Feasible Is the Scaling-Out of Livelihood and Food System Adaptation in Asia-Pacific Islands? *Frontiers in Sustainable Food Systems,* V.4 2020.

V. PROJECT RESULTS FRAMEWORK

This project will contribute to the following Sustainable Development Goal (s): SDGs 1, 2, 3, 5, 6, 7, 8, 11, 12, 13, 17				
This project will contribute to the following country outcome (UNDAF/CPD, RPD, GPD): **NATIONAL PRIORITY:** **UN MSDF Outcome 1:** D'ici à 2023, les populations béninoises, en particulier les plus vulnérables, sont plus résilientes et ont une meilleure qualité de vie par l'accès à un emploi décent, à la sécurité alimentaire et nutritionnelle, à une énergie propre, et par la gestion durable des ressources naturelles, des effets néfastes des changements climatiques, des crises et des catastrophes UNDP CPD Outcome 1: D'ici à 2023, les populations béninoises, en particulier les plus vulnérables, sont plus résilientes et ont une meilleure qualité de vie par l'accès à un emploi décent, à la sécurité alimentaire et nutritionnelle, à une énergie propre, et par la gestion durable des ressources naturelles, des effets néfastes des changements climatiques, des crises et des catastrophes				
	Objective and Outcome Indicators (no more than a total of 21 indicators)	**Baseline**	**Mid-term target**	**End of Project Target**
Project objective	To support achievement of Benin's Land Degradation Neutrality[81] (LDN) targets through climate risk integrated sustainable land and forest management practices and strengthen the climate resilience of vulnerable populations in the Niger Valley, Alibori Sud-Borgou Nord-2KP and Zou-Couffo Agricultural Development Areas[82]			
	Mandatory Indicator #1: # direct project beneficiaries disaggregated by gender (individual people)	0	8,000 including: 2,000 men 2,000 women 4,000 youth	24,000[83], including: 7,000 men 7,000 women 10,000 youth
	Mandatory Indicator #2: Area of land restored (Hectares)	0	4,000 ha	15,000 ha
	Mandatory Indicator #3: Area of **landscapes under improved practices** (excluding protected areas) (Hectares)	0	4,000 ha	15,000 ha

[81] In line with the recommendations of GEF STAP Guidelines for Land Degradation Neutrality, April 2020.

[82] Although Benin is not formally part of the Great Green Wall Initiative, this project will contribute significantly to the objective of the partnership to restore 100 million hectares of currently degraded land, sequester 250 million tonnes of carbon and create 10 million jobs in rural areas by 2030. Benin has already committed to bringing into restoration 0.5 million hectares of degraded and deforested lands under the Bonn Challenge.

[83] The number of indirect beneficiaries is estimated at an additional 344,000 individuals in the three development poles.

	Mandatory Indicator #4: GHG emissions avoided (t CO_{2e})	0	1,000,000 t CO_{2e}	4,471,732 t CO_{2e}
Project Component 1	**Political, financial, institutional, and regulatory frameworks to achieve climate risk informed Land Degradation Neutrality (LDN) and advance integration of vulnerability assessments and adaptation options within land use decisions**			
Project Outcome 1: Strengthened national policy, governance and financial frameworks and capacity to implement climate risk informed SLM and SFM, and climate-proofed sustainable livelihoods contributes to achievement of LDN	Indicator #4: Use (i.e. measurement) of an agreed set of targets for the new national, country-led monitoring system, including indicators on land use change and resilience, vulnerability and adaptive capacity indicators contextualized to local climate change risks.	Little or no monitoring of most of the target indicators	Targets agreed and baseline measurements available	Agreed targets are being measured on an annual basis
	Indicator #5: Number of individuals (including government experts, NGO staff, academics, independent experts) trained in LDN and CCA analysis and planning and using acquired skills as part of their professional responsibilities	Less than 10 individuals	At least 20 individuals	At least 30 individuals
Outputs to achieve Outcome 1	1.1 National LDN and restoration database established within the DGEC under MCVDD, bringing together national data sources, including related data on climate impacts, vulnerability, and adaptation needs, and linking to global systems for monitoring restoration and LDN 1.2 National monitoring and reporting systems for tracking climate change vulnerability in the agricultural sector along with changes in adaptive capacity, land cover, land degradation, restoration, forest ecosystems and ecosystem services 1.3 The National Committee to Combat Desertification, the National Committee for Climate Change and the National REDD+ Committee are strengthened to improve coordination and the ownership and capacity of national authorities to deal with projected climate change risk and sensitivity scenarios. 1.4 National environmental funding mechanisms integrate CCA and LDN objectives, and have enhanced capacity to mobilize and manage relevant funding 1.5 Training and equipment provided to key agencies (DGEC under MCVDD, National Geographic Institute, Directorate of Remote Sensing and Ecological Monitoring, National Institute of Agricultural Resources) to improve implementation of climate risk informed and resilient SLM technologies and conservation of production landscapes, with improved coordination and monitoring of climate change impacts, land degradation trends, restoration, and sustainable forest management			
Project component 2	**Restoration of land and forest ecosystems for improved agricultural productivity, prevention of deforestation, and enhanced climate resilience of vulnerable communities**			
Outcome 2: Target degraded and abandoned lands, forests and ecosystems in selected PDAs 1, 2 and 5 managed and	Indicator #6: Improved forest cover on 15,000 ha of forest ecosystem brought under climate change risk informed restoration and under improved management[84] (Core Indicator 3)	0	4,000 ha	15,000 ha

[84] Details of geographic breakdowns across PDAs and administrative units is provided in Section III above.

restored through climate risk-informed planning and actions	Indicator #7: Improved soil fertility of 15,000 ha of degraded land brought under restoration and under improved management practices[85] (Core Indicator 4)	0	4,000 ha	15,000 ha
Outputs to achieve Outcome 2	2.1 Integrated climate risk, land use, landscape restoration, and forest management plans are developed, with climate change scenarios informing risks and selection of adaptation options, and operationalised at target sites 2.2 Degraded lands amounting to at least 15,000 hectares, and at least 15,000 hectares of forest, are under climate risk informed and resilient restoration and functional and sustainable management regimes 2.3 Awareness raising and training of 1,000 national and local government and administration officials (including ATDAs, DGEC under MCVDD and DGEFC), and representatives of private sector in climate resilient and degradation neutral planning and policies, with focus on agriculture, animal husbandry and forestry, targeting the mainstreaming of CCA and LDN in all policies and administrative decisions 2.4 Extension services in climate resilient and degradation neutral agriculture, animal husbandry and agroforestry provided to 24,000 farmers and community leaders (50% women), including on climate resilient and degradation neutral cotton production. 2.5 Strengthened Green Belt infrastructure against the advance of the desert in the north of Benin			
Project component 3	**Building diversified income-generating activities and value chains to strengthen community resilience to climate change**			
Outcome 3.1: Communities at pilot sites receive tangible benefits from engagement in diversified, climate resilient income generating activities (with supporting value chains that promote LDN)	Indicator #8: Number of LDN and climate resilient value chains with a 30% increase in investment and value aggregation as a result of the project.	0	3	5
	Indicator #9: Number of direct beneficiaries (disaggregated by gender) with at least 25% income gains from targeted climate risk informed value chains	To be determined based on survey of selected beneficiaries	1,500 including: 500 men 500 women 500 youth	4,000, including: 1,000 men 1,000 women 2,000 youth
Outputs to achieve Outcome 3.1	3.1 Five agricultural and agro-forestry value chains are identified and assessed according to their potential to be climate resilient and deliver multiple local, national and global benefits, including income generation, LDN benefit and enhanced adaptive capacity within project PDAs 3.2 Selected climate resilient and sustainable agricultural and agroforestry practices and market channels are strengthened through investments and extension support for climate resilient agricultural practices, leading to triple-bottom-line benefits, strengthened adaptive capacity of vulnerable communities, job and SMME creation 3.3 Local, national, regional and international partnerships developed to support and promote 'forest-friendly' and climate resilient income-generating opportunities 3.4 Strengthened cooperatives and farmer organizations, and negotiated partnerships with traders and processors, for farmers and communities practicing climate-resilient, zero degradation agriculture and agroforestry			
Project component 4	**Gender Empowerment, Knowledge Management, and M&E**			
Outcome 4: Increased technical knowledge, awareness and communication	Indicator #10: Number of women from local communities using improved knowledge of LDN and CCA in their day-to-day work and /or reporting	Some women will have knowledge of LDN and CCA practices already –	100% increase over baseline	300% increase over baseline

[85] See previous footnote.

of LDN and climate resilience challenges, and uptake of gender-based solutions, among stakeholders and partners at sub-national, national and international levels	adoption of climate resilient, zero degradation farming practices	number and level to be determined during inception phase		
	Indicator #11: Additional land areas showing uptake of innovative land use / production practices demonstrated or championed by project	Some innovative practices are likely being employed already	At least three innovative practices show 25% annual expansion/ uptake	At least five innovative practices show 25% annual expansion/ uptake
Outputs to achieve Outcome 4	4.1 Gender action plan is implemented and guides project implementation 4.2 Participatory M&E and quantification of LDN and CCA implementation—including restoration, SFM and SLM actions—as a contribution to national reporting under the UNFCC and other international commitments 4.3 A learning and dissemination network developed and implemented in each of the three PDAs 4.4 National-level communications and public awareness program, incorporating lessons learned by the project, including through participatory monitoring and gender empowerment, is developed and implemented at national, regional and international levels 4.5 Project monitoring and evaluation are ensured			

VI. MONITORING AND EVALUATION (M&E) PLAN

Project-level monitoring and evaluation will be undertaken in compliance with UNDP requirements as outlined in the UNDP POPP (including guidance on GEF project revisions) and UNDP Evaluation Policy. **The UNDP Country Office is responsible for ensuring full compliance with all UNDP project M&E requirements including project monitoring, UNDP quality assurance requirements, quarterly risk management, and evaluation requirements.**

Additional mandatory GEF-specific M&E requirements will be undertaken in accordance with the GEF Monitoring Policy and the GEF Evaluation Policy and other relevant GEF policies[86]. The M&E plan and budget included below will guide the GEF-specific M&E activities to be undertaken by this project.

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 – including during the Project Inception Workshop - and will be detailed in the Inception Report.

Minimum project monitoring and reporting requirements as required by the GEF:

a. Inception Workshop and Report: A project inception workshop will be held within 2 months from the First disbursement date, with the aim to:

b. 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.

c. Discuss the roles and responsibilities of the project team, including reporting lines, stakeholder engagement strategies and conflict resolution mechanisms.

d. Review the results framework and monitoring plan.

e. 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.

f. Update and review responsibilities for monitoring project strategies, including the risk log; SESP report, Social and Environmental Management Framework (where relevant) and other safeguard requirements; project grievance mechanisms; gender strategy; knowledge management strategy, and other relevant management strategies.

g. Review financial reporting procedures and budget monitoring and other mandatory requirements and agree on the arrangements for the annual audit.

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

h. Plan and schedule Project Board meetings and finalize the first-year annual work plan. Finalize the TOR of the Project Board.

i. Formally launch the Project.

GEF Project Implementation Report (PIR):

The annual GEF PIR covering the reporting period July (previous year) to June (current year) will be completed for each year of project implementation. UNDP will undertake quality assurance of the PIR before submission to the GEF. The PIR submitted to the GEF will be shared with the Project Board. UNDP will conduct a quality review of the PIR, and this quality review and feedback will be used to inform the preparation of the subsequent annual PIR.

GEF and LDCF Core Indicators:

The GEF and 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 ground-truthing. The methodologies to be used in data collection have been defined by the GEF and are available on the GEF website.

Independent Mid-term Review (MTR):

An Independent Mid-term Review (MTR) will be conducted no later than 12 June 2025 and no more than 36 months after CEO Endorsement. The terms of reference, the review process and the final MTR report will follow the standard UNDP templates and UNDP guidance for GEF-financed projects avilable on the UNDP Evaluation Resource Center (ERC).

The evaluation will be 'independent, impartial and rigorous'. The evaluators that UNDP will hire 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.

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/NCE-VF Directorate.

The final MTR report and MTR TOR will be publicly available in English and will be posted on the UNDP ERC by 12 June 2025 and no more than 36 months after CEO Endorsement. A management response to MTR recommendations will be posted in the ERC within six weeks of the MTR report's completion.

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. TE should be completed 3 months before the estimated operational closure date, set from the signature of the ProDoc and according to the duration of the project. Provisions should be taken to complete the TE in due time to avoid delay in project closure. Therefore, TE must start no later than 6 months to the expected date of completion of the TE (or 9 months prior to the estimated operational closure date).

The evaluation will be 'independent, impartial and rigorous'. The evaluators that UNDP will hire 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.

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/NCE-VF Directorate.

The final TE report and TE TOR will be publicly available in English and posted on the UNDP ERC by January 2028. A management response to the TE recommendations will be posted to the ERC within six weeks of the TE report's completion.

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.

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[87] and the GEF policy on public involvement[88].

[87] See http://www.undp.org/content/undp/en/home/operations/transparency/information_disclosurepolicy/
[88] See https://www.thegef.org/gef/policies_guidelines

Monitoring Plan

The project results, corresponding indicators and mid-term and end-of-project targets in the project results framework will be monitored by the Project Management Unit annually, and will be reported in the GEF PIR every year, and will be evaluated periodically during project implementation. If baseline data for some of the results indicators is not yet available, it will be collected during the first year of project implementation. Project risks, as outlined in the risk register, will be monitored quarterly.

Results monitoring	Indicators	Targets	Description of indicators and targets	Data source/ Collection Methods	Frequency	Responsible for data collection	Means of verification	Risks/Assumptions
Project objective: To support achievement of Benin's Land Degradation Neutrality (LDN) targets through climate risk integrated sustainable land and forest management practices and strengthen the climate resilience of vulnerable populations in the Niger Valley, Alibori Sud-Borgou Nord-2KP and Zou-Couffo Agricultural Development Areas	**Mandatory** Indicator #1: # of direct project beneficiaries disaggregated by gender (individual people)	24,000, including: 7,000 men, 7,000 women, 10,000 youth	Farmers and other land users showing increased application of LDN and climate-resilience knowledge in their daily activities as a result of technical support, training and /or awareness raising activities	Project surveys of LDN and CCA knowledge and its application before and sometime after training events	Mid-term and end of project	Project M&E specialist	Project-sponsored survey	Assumption: A percentage of direct beneficiaries will become important contributors in diffusing innovative methods Risk: Benin's rural population being highly mobile, some beneficiaries of project activities may not be easy to locate if interval after training is too long
	Mandatory Indicator #2: Area of land restored (Hectares)	15,000 ha	Includes areas of degraded agricultural land, forest and forest land, and natural grass and shrublands. Measurements will include area and degree of improved vegetation cover due to fire suppression, natural regeneration, planting etc	TBD	Mid-term and end of project	Project M&E specialist	Ground surveys and satellite imagery	Restoration efforts are sufficiently cost effective and demonstrably successful during project lifetime to encourage replication and wider uptake, despite short-term climate variability, etc Risk: drought years may interfere with vegetation regeneration

Results monitoring	Indicators	Targets	Description of indicators and targets	Data source/ Collection Methods	Frequency	Responsible for data collection	Means of verification	Risks/Assumptions
	Mandatory Indicator #3: Area of landscapes under improved practices (excluding protected areas) (Hectares)	15,000 ha	Includes areas of degraded agricultural land, forest and forest land, and natural grass and shrublands. Measurement will cover those areas where an improved land management plan has been approved by stakeholders and is being implemented	Land management plans, ground surveys of their implementa-tion	Mid-term and end of project	Project M&E specialist	Records of approval of land management plans; ground surveys of their implementati on	Risk: improved land use plans may be approved but not implemented, therefore need to conduct field surveys of implementation
Project Component 1	**Political, financial, institutional, and regulatory frameworks to achieve climate risk informed Land Degradation Neutrality (LDN) and advance integration of vulnerability assessments and adaptation options within land use decisions**							
Project Outcome 1: Strengthened national policy, governance and financial frameworks and capacity to implement climate risk informed SLM and SFM, and climate-proofed sustainable livelihoods contributes to achievement of LDN	Indicator #4: Use (i.e. measurement) of an agreed set of targets for the new national, country-led monitoring system, including indicators on land use change and resilience, vulnerability and adaptive capacity indicators contextualized to local climate change risks.	Agreed targets are being measured on an annual basis	Measurements and targets will be determined in participatory manner at the beginning of the project. These will combine objective (satellite imagery of forest cover, vegetation indices etc) and subjective (perception of climate change vulnerability) data.	Satellite images, field surveys (ground cover, state of vegetation), interviews of perceived climate change vulnerability	Beginning, mid-term and end of project	Project M&E specialist	Satellite images, surveys	Risk: extreme drought years could interfere with vegetation regeneration and make project impacts difficult to detect
	Indicator #5: Number of individuals (including government experts, NGO staff,	At least 30 individual s	The indicator focuses on the actual use of acquired knowledge and skills in LDN and	Surveys before and several months (up to one year) after trainings	Annual	Project M&E specialist	Surveys of participants of capacity building activities both	The assumption is that beneficiaries of project capacity building continue working in their job.

Results monitoring	Indicators	Targets	Description of indicators and targets	Data source/ Collection Methods	Frequency	Responsible for data collection	Means of verification	Risks/Assumptions
	academics, independent experts) trained in LDN and CCA analysis and planning and using acquired skills as part of their professional responsibilities		CCA sometime after training events				before and several months after training events	Risk: beneficiaries of project capacity building get promoted and no longer work in their technical area
Project Component 2	**Restoration of land and forest ecosystems for improved agricultural productivity, prevention of deforestation, and enhanced climate resilience of vulnerable communities**							
Project Outcome 2: Integrated climate risk informed management and restoration of target degraded and abandoned lands, forests and ecosystems in selected PDAs 1, 2 and 5	Indicator #6: Improved forest cover on 15,000 ha of forest ecosystem brought under climate change risk informed restoration and under improved management (Core Indicator 3)	15,000 ha	Vegetation cover, fire frequency	Satellite imagery and field surveys	Beginning, mid-term and end of project	Project M&E specialist	Satellite images, field surveys	Risk: extreme drought years could interfere with vegetation regeneration and make project impacts difficult to detect
	Indicator #7: Improved soil fertility of 15,000 ha of degraded land brought under restoration and under improved management practices (Core Indicator 4)	15,000 ha	Soil cover, indices of soil erosion, chemical soil analyses in select areas	Field surveys, laboratory analyses on soil samples from a select number of sites	Beginning, mid-term and end of project	Project M&E specialist	Field surveys, laboratory analyses on soil samples from a select number of sites	Assumption: sites for soil fertility measurements are carefully selected and sampled
Project Component 3	**Building diversified income-generating activities and value chains to strengthen community resilience to climate change**							
Outcome 3: Communities at pilot sites receive	Indicator #8: Number of LDN and climate resilient value chains	5 value chains	Detailed surveys will be made with actors of the value chains	Surveys of value chain actors	Annual	Project M&E specialist	Surveys of value chain actors	Assumption: value chain actors are willing to provide accurate

Results monitoring	Indicators	Targets	Description of indicators and targets	Data source/ Collection Methods	Frequency	Responsible for data collection	Means of verification	Risks/Assumptions
tangible benefits from engagement in diversified, climate resilient income generating activities (with supporting value chains that promote LDN)	with a 30% increase in investment and value aggregation as a result of the project.		(e.g. traders, processors) to determine investments and value aggregation in those value chains benefiting from project investment					information on their economic activities, which is not always the case
	Indicator #9: Number of direct beneficiaries (disaggregated by gender) with at least 25% income gains from targeted climate risk informed value chains	4,000, including: 1,000 men 1,000 women 2,000 youth	Detailed income surveys will be made with beneficiaries, separated by income source, to determine the income benefit derived from LDN and climate-resilient activities	Income surveys from beneficiary groups	Annual	Project M&E specialist	Income surveys	Assumption: beneficiaries are willing to provide accurate information on their income from various sources, which is not always the case
Outcome 4: Increased technical knowledge, awareness and communication of LDN and climate resilience challenges, and uptake of gender-based solutions, among stakeholders and partners at sub-national, national and international levels	**Gender Empowerment, Knowledge Management, and M&E**							
	Indicator #10: Number of women from local communities using improved knowledge of LDN and CCA in their day-to-day work and /or reporting adoption of climate resilient, zero degradation farming practices	300% increase over baseline	Detailed income surveys will be made with beneficiaries, separated by income source, to determine the income benefit derived from LDN and climate-resilient activities	Income surveys from beneficiary groups	Annual	Project M&E specialist	Income surveys	Assumption: beneficiaries are willing to provide accurate information on their income from various sources, which is not always the case
	Indicator #11: Additional land areas showing uptake of innovative land use / production practices	At least five innovative practices show 25%	Innovative land use practices could include fire suppression, the planting of agroforestry trees in	Satellite imagery and field surveys	Beginning, mid-term and end of project	Project M&E specialist	Satellite imagery and field surveys	Risk: extreme climate (e.g. drought) years could interfere with the

Results monitoring	Indicators	Targets	Description of indicators and targets	Data source/ Collection Methods	Frequency	Responsible for data collection	Means of verification	Risks/Assumptions
	demonstrated or championed by project	annual expansion/ uptake	fields and pasture areas, soil conservation measures, restoration of riparian forests					detection of project impacts

Monitoring and Evaluation Budget for project execution: *This M&E budget provides a breakdown of costs for M&E activities to be led by the Project Management Unit during project implementation. These costs are equivalent to those of the M&E Component of the Results Framework and TBWP.. The oversight and participation of the UNDP Country Office/Regional technical advisors/HQ Units in these M&E activities and in performing standard UNDP M&E requirements are not included as these are covered by the GEF Fee.*		
GEF M&E requirements to be undertaken by Project Management Unit (PMU)	**Indicative costs (US$)**	**Time frame**
Inception Workshop and Report	$15,000	Inception Workshop within 2 months of the First Disbursement
M&E required to report on progress made in reaching GEF core indicators and project results included in the project results framework	Staff time	Annually and at mid-point and closure.
Preparation of the annual GEF Project Implementation Report (PIR)	Staff time	Annually typically between June-August
Monitoring of project safeguards, including SESP, ESMF, stakeholder participation plan, gender action plan[89]	$108,000	On-going.
Supervision missions	$30,000	Annually
Learning missions	$30,000	As needed
Independent Mid-term Review (MTR): ***costs associated with conducting the independent review/evaluation to be commissioned by UNDP not the Implementing Partner or PMU.***	$30,000	No later than 3 June 2025
Independent Terminal Evaluation (TE): ***costs associated with conducting the independent evaluation to be commissioned by UNDP not the Implementing Partner or the PMU.***	$50,000	No later than 31 March 2027
TOTAL indicative COST	$263,000	*Equivalent to TBWP component (M&E)*

[89] The M&E for Safeguards plans is included in the ESMF (Annex 9).

VII. GOVERNANCE AND MANAGEMENT ARRANGEMENTS

Section 1: General roles and responsibilities in the projects' governance mechanism

1. Implementing Partner: The implementing partner for this project is the General Directory of Environment and Climate (DGEC), under the Ministry of the Living Environment and Sustainable Development (MCVDD). It will work closely with the General Directory of Water, Forest and Hunting (DGEFC) under the same Ministry.

2. 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.

3. 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.
   - Overseeing the management of project risks as included in this project document and new risks that may emerge during project implementation.
   - 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.

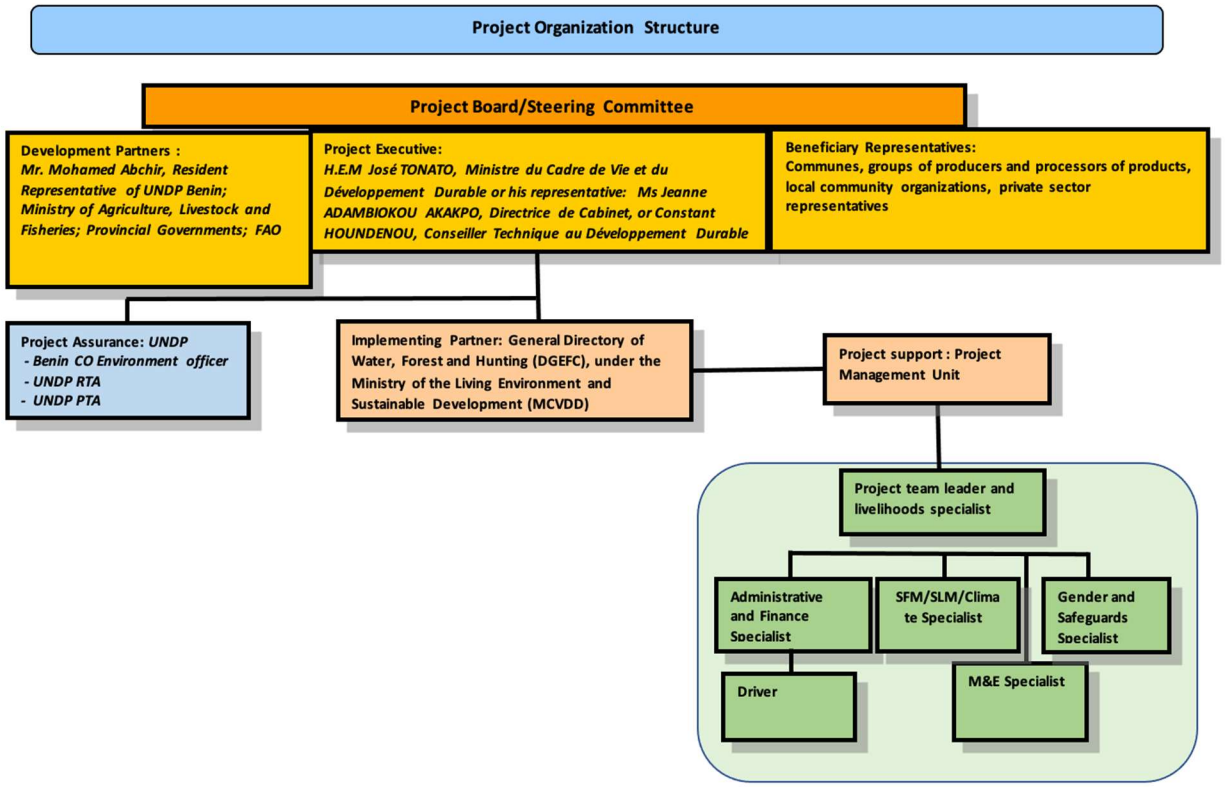
4. Project stakeholders and target groups: The project stakeholders have been informed and engaged in the project design phase and the main categories have been identified and assessed. During the first six months of the project, considering the SESA and ESIA findings, the stakeholders list may be updated, and the engagement actions may be adapted to the SESA and ESIA findings. The project will pay particular attention to the engagement of the most vulnerable groups, such as women and youth, including all the ethnic groups present in the project areas, with a focus on ethnic minorities.

5. Engagement of stakeholders and target groups is further detailed in Annex 8.

6. UNDP: UNDP is accountable to the GEF for the implementation of this project. This includes overseeing project execution undertaken by the Implementing Partner to ensure that the project is being carried out in accordance with UNDP and GEF policies and procedures and the standards and provisions outlined in the Delegation of Authority (DOA) letter for this project. **The UNDP GEF Executive Coordinator, in consultation with UNDP**

Bureaus and the Implementing Partner, retains the right to revoke the project DOA, suspend or cancel this GEF project. UNDP is responsible for the Project Assurance function in the project governance structure and presents to the Project Board and attends Project Board meetings as a non-voting member.

Figure 2: Project governance arrangements



The UNDP Resident Representative assumes full responsibility and accountability for oversight and quality assurance of this Project and ensures its timely implementation in compliance with the GEF-specific requirements and UNDP's Programme and Operations Policies and Procedures (POPP), its Financial Regulations and Rules and Internal Control Framework. A representative of the UNDP Country Office will assume the assurance role and will present assurance findings to the Project Board, and therefore attends Project Board meetings as a non-voting member.

Section 3: Segregation of duties and firewalls vis-à-vis UNDP representation on the project board:

As noted in the Minimum Fiduciary Standards for GEF Partner Agencies, in cases where a GEF Partner Agency (i.e. UNDP) carries out both implementation oversight and execution of a project, the GEF Partner Agency (i.e. UNDP) must separate its project implementation oversight and execution duties, and describe in the relevant project document a: 1) Satisfactory institutional arrangement for the separation of implementation oversight and executing

functions in different departments of the GEF Partner Agency; and 2) Clear lines of responsibility, reporting and accountability within the GEF Partner Agency between the project implementation oversight and execution functions.

In this case, UNDP is only performing an implementation oversight role in the project vis-à-vis our role in the project board and in the project assurance function and therefore a full separation of project implementation oversight and execution duties has been assured.

Section 4: Roles and Responsiblities of the Project Organization Structure:

a) Project Board: All UNDP projects must be governed by a multi-stakeholder board or committee established to review performance based on monitoring and evaluation, and implementation issues to ensure quality delivery of results. The Project Board (also called the Project Steering Committee) is the most senior, dedicated oversight body for a project.

7. The two main (mandatory) roles of the project board are as follows:

1) **High-level oversight of the execution of the project by the Implementing Partner** (as explained in the "Provide Oversight" section of the POPP). This is the primary function of the project board and includes annual (and as-needed) assessments of any major risks to the project, and decisions/agreements on any management actions or remedial measures to address them effectively. The Project Board reviews evidence of project performance based on monitoring, evaluation and reporting, including progress reports, evaluations, risk logs and the combined delivery report. The Project Board is responsible for taking corrective action as needed to ensure the project achieves the desired results.
2) **Approval of strategic project execution decisions of the Implementing Partner** with a view to assess and manage risks, monitor and ensure the overall achievement of projected results and impacts and ensure long term sustainability of project execution decisions of the Implementing Partner (as explained in the "Manage Change" section of the POPP).

Requirements to serve on the Project Board:

- ✓ Agree to the Terms of Reference of the Board and the rules on protocols, quorum and minuting.
- ✓ Meet annually; at least once.
- ✓ Disclose any conflict of interest in performing the functions of a Project Board member and take all measures to avoid any real or perceived conflicts of interest. This disclosure must be documented and kept on record by UNDP.
- ✓ Discharge the functions of the Project Board in accordance with UNDP policies and procedures.
- ✓ Ensure highest levels of transparency and ensure Project Board meeting minutes are recorded and shared with project stakeholders.

Responsibilities of the Project Board:

- ✓ Consensus decision making:
    - The project board provides overall guidance and direction to the project, ensuring it remains within any specified constraints, and providing overall oversight of the project implementation.
    - Review project performance based on monitoring, evaluation and reporting, including progress reports, risk logs and the combined delivery report;
    - The project board is responsible for making management decisions by consensus.
    - 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 representative on the board will mediate to find consensus and, if this cannot be found, will take the final decision to ensure project implementation is not unduly delayed.
- ✓ Oversee project execution:
    - Agree on project manager's tolerances as required, within the parameters outlined in the project document, and provide direction and advice for exceptional situations when the project manager's tolerances are exceeded.
    - Appraise annual work plans prepared by the Implementing Partner for the Project; review combined delivery reports prior to certification by the implementing partner.
    - Address any high-level project issues as raised by the project manager and project assurance;
    - Advise on major and minor amendments to the project within the parameters set by UNDP and the donor and refer such proposed major and minor amendments to the UNDP BPPS Nature, Climate and Energy Executive Coordinator (and the GEF, as required by GEF policies);
    - Provide high-level direction and recommendations to the project management unit to ensure that the agreed deliverables are produced satisfactorily and according to plans.
    - Track and monitor co-financed activities and realisation of co-financing amounts of this project.
    - Approve the Inception Report, GEF annual project implementation reports, mid-term review and terminal evaluation reports.
    - Ensure commitment of human resources to support project implementation, arbitrating any issues within the project.
- ✓ Risk Management:
    - Provide guidance on evolving or materialized project risks and agree on possible mitigation and management actions to address specific risks.
    - Review and update the project risk register and associated management plans based on the information prepared by the Implementing Partner. This includes risks related that can be directly managed by this project, as well as contextual risks that may affect project delivery or continued UNDP compliance and

reputation but are outside of the control of the project. For example, social and environmental risks associated with co-financed activities or activities taking place in the project's area of influence that have implications for the project.
    - Address project-level grievances.
- ✓ Coordination:
    - Ensure coordination between various donor and government-funded projects and programmes.
    - Ensure coordination with various government agencies and their participation in project activities.

Composition of the Project Board: The composition of the Project Board must include individuals assigned to the following three roles:

1. **Project Executive:** This is an individual who represents ownership of the project and chairs (or co-chairs) the Project Board. The Executive usually is the senior national counterpart for nationally implemented projects (typically from the same entity as the Implementing Partner), and it must be UNDP for projects that are direct implementation (DIM). In exceptional cases, two individuals from different entities can co-share this role and/or co-chair the Project Board. If the project executive co-chairs the project board with representatives of another category, it typically does so with a development partner representative. The Project Executive is the Direction Générale des Eaux, Forêts et Chasse of the Ministère du Cadre de Vie et du Développement Durable.

2. **Beneficiary Representative(s):** Individuals or groups representing the interests of those groups of stakeholders 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 representatives from civil society, industry associations, or other government entities benefiting from the project can fulfil this role. There can be multiple beneficiary representatives in a Project Board. The Beneficiary representative (s) is/are: representatives of the populations of the municipalities in development poles 1, 2 and 5.

3. **Development Partner(s):** Individuals or groups representing the interests of the parties concerned that provide funding, strategic guidance and/or technical expertise to the project. The Development Partner(s) is/are: UNDP RR or his delegate. Representatives of universities, research institutions and national associations will be included in the Project Steering Committee.

b) **Project Assurance:** Project assurance is the responsibility of each project board member; however, UNDP has a distinct assurance role for all UNDP projects in carrying out objective and independent project oversight and monitoring functions. UNDP performs quality assurance and supports the Project Board (and Project Management Unit) by carrying out objective and independent project oversight and monitoring functions, including compliance with the risk management and social and environmental standards of UNDP.

The Project Board cannot delegate any of its quality assurance responsibilities to the Project Manager. Project assurance is totally independent of project execution.

A designated representative of UNDP playing the project assurance role is expected to attend all board meetings and support board processes as a non-voting representative. It should be noted that while in certain cases UNDP's project assurance role across the project may encompass activities happening at several levels (e.g. global, regional), at least one UNDP representative playing that function must, as part of their duties, specifically attend board meeting and provide board members with the required documentation required to perform their duties. The UNDP representative playing the main project assurance function is Elisabeth TOSSOU.

c) **Project Management – Execution of the Project:** The Project Manager (PM) (also called project coordinator) is the senior most representative of the Project Management Unit (PMU) and is responsible for the overall day-to-day management of the project on behalf of the Implementing Partner, including the mobilization of all project inputs, supervision over project staff, responsible parties, consultants and sub-contractors. The project manager typically presents key deliverables and documents to the board for their review and approval, including progress reports, annual work plans, adjustments to tolerance levels and risk registers. The project coordinator will be recruited by emphasizing in addition to his/her experience in project management, knowledge and proven experience relate to sustainable forest and land management (SLM/SFM).

A designated representative of the PMU is expected to attend all board meetings and support board processes as a non-voting representative.

The primary PMU representative attending board meetings is the Project Manager.

VIII. FINANCIAL PLANNING AND MANAGEMENT

The total cost of the project is *USD* **57,305,492**. This is financed through a GEF grant of USD 4,566,667, an LCDF grant of USD 4,466,210, USD 480,000 in cash co-financing to be administered by UNDP, USD 800,000 of UNDP in-kind co-financing and *USD 46,992,615* in other co-financing. UNDP, as the GEF Implementing Agency, is responsible for the oversight of the GEF resources and the cash co-financing transferred to UNDP bank account only.

Co-financing: The actual realization of project co-financing amounts will be monitored by the UNDP Country Office and the PMU on an annual basis in the GEF PIF and will be reported to the GEF during the *mid-term review* and terminal evaluation process as follows:

Table 6: Co-financing

Co-financing source	Co-financing type	Co-financing amount (USD)
Government	Grants	43, 000,000
Government	Grant	1,000,000
Government	In-kind	1,400,000
UNDP	Grant	480,000
UNDP	In-kind	800,000
NGO ALDIPE	In-Kind	181,335
NGO ALDIPE	Grant	234,913
NGO CAPES	In-kind	93,750
NGO CAPES	Grant	100,000
NGO API Service Monde	In-Kind	30,700
NGO API Service Monde	Grant	5,250
NGO DEDRAS	In-Kind	600,000
NGO DEDRAS	Grant	330,000
NGO APIC	In-Kind	16,667

Budget Revision and Tolerance: As per UNDP POPP, the project board may agree with the project manager on a tolerance level for each detailed plan under the overall multi-year workplan. The agreed tolerance should be written in the project document or approved project board meeting minutes. It should normally not exceed 10 percent of the agreed annual budget at the activity level, but within the overall approved multi-year workplan at the activity level. Within the agreed tolerances, the project manager can operate without intervention from the project board. Restrictions apply as follows:

Should the following deviations occur, the Project Manager/IP through UNDP Country Office will seek the approval of the BPPS/NCE-VF team to ensure accurate reporting to the GEF. It is **strongly encouraged** to maintain the expenditures within the approved budget at the budgetary account and at the component level:

a) Budget reallocations must prove that the suggested changes in the budget will not lead to material changes in the results to be achieved by the project. A strong justification is required and will be approved on an exceptional basis. Budget re-allocations among the components (including PMC) of the approved Total Budget and Work Plans (TBWP) that represent a value greater than 10% of the total GEF grant.
b) Introduction of new outputs/activities (i.e. budget items) that were not part of the agreed project document and TBWP that represent a value greater than 5% of the total GEF grant. The new budget items must be eligible as per the GEF and UNDP policies.
c) Project management cost (PMC): budget under PMC component is capped and cannot be increased.

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

Project extensions: The UNDP Resident Representative and 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 subject to the conditions and maximum durations set out in the UNDP POPP; 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 additional UNDP oversight costs during the extension period must be covered by non-GEF resources, in accordance with UNDP's guidance set out in UNDP POPP.

Audit: The project will be audited as per UNDP Financial Regulations and Rules and applicable audit policies. Audit cycle and process must be discussed during the Inception workshop. If the Implementing Partner is an UN Agency, the project will be audited according to that Agencies applicable audit policies.

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.

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. **Operational closure must happen at the end date calculated by the approved duration after the Project Document signature or at the revised operational closure date as approved in the project extension. Any expected activity after the operational date requires project extension approval.** The Implementing Partner through a Project Board decision will notify the UNDP Country Office when operational closure has been completed. At this time, the project should have completed the transfer or disposal of any equipment that is still the property of UNDP.

Transfer or disposal of assets: In consultation with the Implementing Partner and other parties of the project, UNDP 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 (it is strongly encouraged to be done before the operational closure date). In all cases of transfer, a transfer document must be prepared and kept on file[90]. The transfer should be done before Project Management Unit complete their assignments.

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

Financial completion (closure): The project will be financially closed when the following conditions have been met: a) the project is operationally completed or has been cancelled; b) the Implementing Partner has reported all financial transactions to UNDP; c) UNDP has closed the accounts for the project; d) UNDP and the Implementing Partner have certified a final Combined Delivery Report (which serves as final budget revision).

The project will be financially completed **within 6 months of operational closure or after the date of cancellation**. If Operational Closure is delayed for any justified and approved reason, the Country Office should do all efforts to Financially Close the project within 9 months after TE is completed. 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/NCE-VF Unit for confirmation before the project will be financially closed in Atlas by the UNDP Country Office.

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

IX. TOTAL BUDGET AND WORK PLAN

Total Budget and Work Plan			
Atlas Award ID:	00140000	Atlas Output Project ID:	00129365
Atlas Proposal or Award Title:	PIMS 6514 Degraded land and forest restoration		
Atlas Business Unit	BEN10		
Atlas Primary Output Project Title	PIMS 6514 Degraded land and forest restoration		
UNDP-GEF PIMS No. GEF Project ID	6514 10688		
Implementing Partner	Directory of Environment and Climate (DGEC), under the Ministry of the Living Environment and Sustainable Development (MCVDD)		

Atlas activity (GEF component)	Atlas implemen-ting agent	Atlas 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)	Amount Year 6 (USD)	Total (USD)	Budget note
Component 1	DGEC under MCVDD		GEFTF	71300	Local Consultants	4,000	4,000	4,000	4,000	0	0	**16,000**	1
				71400	Contractual Services - Individ	3,000	3,000	3,000	3,000	3,000	3,000	**18,000**	2
				72100	Contractual services - Companies	25,000	50,000	72,750	13,500	0	0	**161,250**	3
				75700	Workshops	10,000	10,000	10,000	10,000	10,000	10,000	**60,000**	4
				71600	Travel	5,000	5,000	5,000	5,000	5,000	5,000	**30,000**	5
				72200	Equipment & furniture	25,000	25,000	25,000	0	0	0	**75,000**	6
					Sub-total Outcome 1 (GEFTF)	**72,000**	**97,000**	**119,750**	**35,500**	**18,000**	**18,000**	**360,250**	
	DGEC under MCVDD		LDCF	71400	Contractual Services - Individ	3,000	3,000	3,000	3,000	3,000	3,000	**18,000**	7
				72100	Contractual services - Companies	25,000	50,000	47,250	13,500			**135,750**	8
				75700	Workshops	10,000	10,000	10,000	10,000	10,000	10,000	**60,000**	9
				72200	Equipment & furniture	25,000	25,000	25,000				**75,000**	10
					Sub-total Outcome 1 (LDCF)	**63,000**	**88,000**	**85,250**	**26,500**	**13,000**	**13,000**	**288,750**	
	UNDP		UNDP	71400	Contractual Services - Individ	3,000	3,000	3,000	3,000	3,000	3,000	**18,000**	11
				72100	Contractual services - Companies		40,000	30,263				**70,263**	12

					Sub-total Outcome 1 (UNDP)	**3,000**	**43,000**	**33,263**	**3,000**	**3,000**	**3,000**	**88,263**	
					OUTCOME 1 TOTAL	**138,000**	**228,000**	**238,263**	**65,000**	**34,000**	**34,000**	**737,263**	
Component 2	DGEC under MCVDD		GEFTF	71200	International Consultants	10,000	10,000	10,000				**30,000**	13
				71300	Local Consultants	7,500	7,500	5,000	5,000	5,000	5,000	**35,000**	14
				71400	Contractual Services - Individ	21,000	21,000	21,000	21,000	21,000	21,000	**126,000**	15
				72100	Contractual services - Companies	-	550,000	550,000	600,000	595,000	590,000	**2,885,000**	16
				75700	Workshops	20,000	20,000	20,000	20,000	10,000	10,000	**100,000**	17
				71600	Travel	4,000	4,000	4,000	4,000	5,000	4,400	**25,400**	18
					Sub-total Outcome 2 (GEFTF)	**62,500**	**612,500**	**610,000**	**650,000**	**636,000**	**630,400**	**3,201,400**	
	DGEC under MCVDD		LDCF	71200	International Consultants	10,000	10,000	10,000				**30,000**	19
				71300	Local Consultants	7,500	7,500	5,000	5,000	5,000	5,000	**35,000**	20
				71400	Contractual Services - Individ	21,000	21,000	21,000	21,000	21,000	21,000	**126,000**	21
				72100	Contractual services - Companies	0	150,000	200,000	195,000	190,000	150,000	**885,000**	22
				75700	Workshops	20,000	20,000	20,000	20,000	10,000	10,000	**100,000**	23
				71600	Travel	5,000	5,000	5,000	5,600	5,000	6,000	**31,600**	24
					Sub-total Outcome 2 (LDCF)	**63,500**	**213,500**	**261,000**	**246,600**	**231,000**	**192,000**	**1,207,600**	
	UNDP		UNDP	71400	Contractual Services - Individ	3,000	3,000	3,000	3,000	3,000	3,000	**18,000**	25
					Sub-total Outcome 2 (UNDP)	**3,000**	**3,000**	**3,000**	**3,000**	**3,000**	**3,000**	**18,000**	
					OUTCOME 2 TOTAL	**129,000**	**829,000**	**874,000**	**899,600**	**870,000**	**825,400**	**4,427,000**	
Component 3	DGEC under MCVDD		GEFTF	71400	Contractual Services - Individ	13,500	13,500	13,500	13,500	13,500	13,500	**81,000**	26
				72100	Contractual services - Companies	0	50,000	100,000	129,000	70,000	5,937	**354,937**	27
					Sub-total Outcome 3 (GEFTF)	**13,500**	**63,500**	**113,500**	**142,500**	**83,500**	**19,437**	**435,937**	
	DGEC under MCVDD		LDCF	71200	International Consultants	25,000	35,000	36,000	35,000	20,000	15,000	**166,000**	28
				71300	Local Consultants	10,000	15,000	15,000	15,000	16,000	10,000	**81,000**	29
				71400	Contractual Services - Individ	13,500	13,500	13,500	13,500	13,500	13,500	**81,000**	30
				72100	Contractual services - Companies	0	250,000	250,000	350,000	354,000	289,063	**1,493,063**	31
				75700	Workshops	20,000	20,000	20,000	20,000	5,000	0	**85,000**	32
				71600	Travel	5,000	5,000	5,000	5,000	4,837	5,000	**29,837**	33
				72200	Equipment & furniture	0	50,000	160,000	150,000	140,000	0	**500,000**	34
					Sub-total Outcome 3 (LDCF)	**73,500**	**388,500**	**499,500**	**588,500**	**553,337**	**332,563**	**2,435,900**	
	UNDP		UNDP	71400	Contractual Services - Individ	3,000	3,000	3,000	3,000	3,000	3,000	**18,000**	35
					Sub-total Outcome 3 (UNDP)	**3,000**	**3,000**	**3,000**	**3,000**	**3,000**	**3,000**	**18,000**	
					OUTCOME 3 TOTAL	**90,000**	**455,000**	**616,000**	**734,000**	**639,837**	**355,000**	**2,889,837**	

	DGEC under MCVDD		GEFTF	71200	International Consultants	0	9,500	0	0	0	0	**9,500**	36
				71300	Local Consultants	5,000	5,000	9,000	6,000	6,000	9,000	**40,000**	37
				71400	Contractual Services - Individ	9,000	9,000	9,000	9,000	9,000	9,000	**54,000**	38
				75700	Workshops	0	0	15,000	15,000	15,000	15,000	**60,000**	39
				71600	Travel	5,000	5,000	5,000	0	0	0	**15,000**	40
				74200	Audio Visual&Print Prod Costs		10,000	10,000	10,000	8,000	11,120	**49,120**	41
					Sub-total Outcome 4 excl. M&E (GEFTF)	**19,000**	**38,500**	**48,000**	**40,000**	**38,000**	**44,120**	**227,620**	
Component 4 (excl. M&E)	DGEC under MCVDD		LDCF	71200	International Consultants	0	7,500	0	0	0	0	**7,500**	42
				71300	Local Consultants	2,000	2,000	6,000	3,000	3,000	6,000	**22,000**	43
				71400	Contractual Services - Individ	9,000	9,000	9,000	9,000	9,000	9,000	**54,000**	44
				75700	Workshops	0	5,000	5,000	5,000	5,000	10,000	**30,000**	45
				71600	Travel	5,000	5,000	5,000	5,000	5,000	5,000	**30,000**	46
				74200	Audio Visual&Print Prod Costs		10,000	14,000	14,000	783	0	**38,783**	47
					Sub-total Outcome 4 excl. M&E (LDCF)	**16,000**	**38,500**	**39,000**	**36,000**	**22,783**	**30,000**	**182,283**	
	UNDP		UNDP	71300	Local consultants			10,000	15,000	15,000	5,000	**45,000**	48
				71400	Contractual Services - Individ	6,000	6,000	6,000	6,000	6,000	6,000	**36,000**	49
				71600	Travel	2,737	6,000	6,000	6,000	6,000	6,000	**32,737**	50
				74200	Audio Visual&Print Prod Costs	0	0	0	0	10,000	10,000	**20,000**	51
					Sub-total Outcome 4 excl. M&E (UNDP)	**8,737**	**12,000**	**22,000**	**27,000**	**37,000**	**27,000**	**133,737**	
					OUTCOME 4 excl. M&E TOTAL	**43,737**	**89,000**	**109,000**	**103,000**	**97,783**	**101,120**	**543,640**	
Component 4 (M&E)	DGEC under MCVDD		GEFTF	71200	International Consultants	0	0	10,000	0	0	15,000	**25,000**	52
				71300	Local Consultants	0	0	5,000	0	0	10,000	**15,000**	53
				71400	Contractual Services - Individ	9,000	9,000	9,000	9,000	9,000	9,000	**54,000**	54
				71600	Travel	0	5,500	5,500	5,500	3,000	3,000	**22,500**	55
				75700	Workshops	7,500	0	0	0	0	0	**7,500**	56
					Sub-total Outcome 4 M&E (GEFTF)	**16,500**	**14,500**	**29,500**	**14,500**	**12,000**	**37,000**	**124,000**	
	DGEC under MCVDD		LDCF	71200	International Consultants	0	0	10,000	0	0	15,000	**25,000**	57
				71300	Local Consultants	0	0	5,000	0	0	10,000	**15,000**	58
				71400	Contractual Services - Individ	9,000	9,000	9,000	9,000	9,000	9,000	**54,000**	59
				71600	Travel	5,000	7,500	7,500	7,500	5,000	5,000	**37,500**	60
				75700	Workshops	7,500	0	0	0	0	0	**7,500**	61

					Sub-total Outcome 4 M&E (LDCF)	**21,500**	**16,500**	**31,500**	**16,500**	**14,000**	**39,000**	**139,000**	
					OUTCOME 4 M&E TOTAL	**38,000**	**31,000**	**61,000**	**31,000**	**26,000**	**76,000**	**263,000**	
PMC	DGEC under MCVDD		GEFTF	71400	Contractual Services - Individ	29,700	29,700	29,700	29,700	29,700	29,700	**178,200**	62
				71600	Travel	0	0	5,000	5,000	5,000	4,260	**19,260**	63
				72200	Equipment and Furniture	20,000	0	0	0	0	0	**20,000**	64
					Sub-total PMC (GEFTF)	**49,700**	**29,700**	**34,700**	**34,700**	**34,700**	**33,960**	**217,460**	
	DGEC under MCVDD		LDCF	71400	Contractual Services - Individ	29,700	29,700	29,700	29,700	29,700	29,700	**178,200**	65
				71600	Travel	0	0	0	0	0	5,477	**5,477**	66
				72200	Equipment and Furniture	20,000	0	0	0	0	0	**20,000**	67
				74500	Communic & Audio Equip	4,500	4,500	0	0	0	0	**9,000**	68
					Sub-total PMC (LDCF)	**54,200**	**34,200**	**29,700**	**29,700**	**29,700**	**35,177**	**212,677**	
	UNDP		UNDP	71400	Contractual Services - Individ	14,400	14,400	14,400	14,400	14,400	14,400	**86,400**	69
				72200	Equipment and Furniture	135,600	0	0	0	0	0	**135,600**	70
					Sub-total PMC (UNDP)	**150,000**	**14,400**	**14,400**	**14,400**	**14,400**	**14,400**	**222,000**	
					PMC TOTAL	**253,900**	**78,300**	**78,800**	**78,800**	**78,800**	**83,537**	**652,137**	
					PROJECT TOTAL GEFTF	**233,200**	**855,700**	**955,450**	**917,200**	**822,200**	**782,917**	**4,566,667**	
					PROJECT TOTAL LDCF	**291,700**	**779,200**	**945,950**	**943,800**	**863,820**	**641,740**	**4,466,210**	
					PROJECT TOTAL UNDP	**167,737**	**75,400**	**75,663**	**50,400**	**60,400**	**50,400**	**480,000**	
					PROJECT GRAND TOTALS	**692,637**	**1,710,300**	**1,977,063**	**1,911,400**	**1,746,420**	**1,475,057**	**9,512,877**	

Summary of Funds:

	Amount Year 1	Amount Year 2	Amount Year 3	Amount Year 4	Amount Year 5	Amount Year 6	Total
GEF grant administered by UNDP	$233,200	$855,700	$955,450	$917,200	$822,200	$782,917	$4,566,667
LDCF grant administered by UNDP	$291,700	$779,200	$945,950	$943,800	$863,820	$641,740	$4,466,210
UNDP	$167,737	$75,400	$75,663	$50,400	$60,400	$50,400	$480,000
Government	$7,166,667	$7,166,667	$7,166,667	$7,166,667	$7,166,666	$7,166,666	$43,000,000
Government	$400,000	$400,000	$400,000	$400,000	$400,000	$399,998	$2,400,000
NGO ALDIPE	$69,375	$69,375	$69,375	$69,375	$69,375	$69,376	$416,248
NGO CAPES	$32,292	$32,292	$32,292	$32,292	$32,291	$32,291	$193,750
NGO API Service Monde	$6,833	$6,833	$6,833	$6,833	$6,834	$1,784	$35,950

NGO DEDRAS	$155,000	$155,000	$155,000	$155,000	$155,000	$155,000	$930,000
NGO APIC	$2,778	$2,778	$2,778	$2,778	$2,778	$2,777	$16,667
TOTAL	$8,677,915	$9,689,178	$9,983,941	$9,925,278	$9,689,297	$9,339,882	$57,305,492

Budget notes

Budget note number	Total per BN, USD (BENIN)	Activity number and input description
Component 1		
1	16,000	Component 1 Local consultants: This budget is reserved to cover the cost of contractual appointment of: (1) LC1 - Sustainable land use management: policy and planning specialist(s), 80 days @ 200 / day. The work will focus technically on implementation of Outputs 1.1 -1.5. Annex 7 (p. 182) provides additional details at activity level.
2	18,000	Component 1 Contractual services individual: This budget is reserved to cover the cost of contractual appointment of: (1) PMU1 - Gender & safeguards specialist - 6 months @ $3,000 / month. The work will focus on technical aspects of implementation of gender and other safeguards associated with implementation of Component 1 including implementation of the following: (i) SESA action matrix, (ii) Engagement Plan, (iii) Ethnic Groups Plan; (iv) Environmental and Social Impact Management Plan (ESMP). Annex 7 (p. 183) provides additional details at activity level. Note: This position is also funded under BN 7, 11, 15, 21, 25, 26, 30, 38 and 49
3	161,250	Component 1 Contractual services companies: This budget is reserved to cover the cost of contractual appointment of: (1) SC1 - Development of GIS and remote-sensing based monitoring system and associated activities, including training, pilot testing in PDAs. The work will focus on technical aspects of implementation of portions of Outputs 1.1, 1.2 and 1.5. Annex 7 (p. 183) provides additional details at activity level. Note: Additional funding for this sub-contract is located under BN 8 and 12.
4	60,000	Component 1 workshops: This budget is reserved for hiring trainers and convening training and awareness workshops as follows: (1) Workshops for training / capacity building, safeguards, meetings of NCCD and stakeholder consultation, latter related to implementation of SESA, engagement plan, ethnic groups plan and ESMP.
5	30,000	Travel: Mission travel by project staff and short-term technical experts to and from PMU, project sites and Cotonou under Outcome 1
6	75,000	Equipment and furniture: Material support for key agencies (Ministry of Environment, National Geographic Institute, National Agricultural Resource Institute), consisting of: • 6 computers with capacity to process large data sets • 6 large monitors • 6 printers • Three sets of improved internet installations

Budget note number	Total per BN, USD (BENIN)	Activity number and input description
7	18,000	Component 1 Contractual services individual: This budget is reserved to cover the cost of contractual appointment of: (1) PMU1 - Gender & safeguards specialist - 6 months @ $3,000 / month. The work will focus on technical aspects of implementation of gender and other safeguards associated with implementation of Component 1. Annex 7 (p. 183) provides additional details at activity level. Note: This position is also funded under BN 7, 11, 15, 21, 25, 26, 30, 38 and 49
8	135,750	Component 1 Contractual services companies: This budget is reserved to cover the cost of contractual appointment of: (1) SC1 - Development of GIS and remote-sensing based monitoring system and associated activities, including training, pilot testing in PDAs. The work will focus on technical aspects of implementation of portions of Outputs 1.1, 1.2 and 1.5. Annex 7 (p. 183) provides additional details at activity level. Note: Additional funding for this sub-contract is located under BN 3 and 12.
9	60,000	Component 1 workshops: Workshops for training / capacity building, safeguards, meetings of NCCD and stakeholder consultation
10	75,000	Equipment and furniture: Material support for key agencies (Ministry of Environment, National Geographic Institute, National Agricultural Resource Institute), consisting of: • 6 computers with capacity to process large data sets • 6 large monitors • 6 printers • Three sets of improved internet installations
11	18,000	Component 1 Contractual services individual: This budget is reserved to cover the cost of contractual appointment of: (1) PMU1 - Gender & safeguards specialist - 6 months @ $3,000 / month. The work will focus on technical aspects of implementation of gender and other safeguards associated with implementation of Component 1 including implementation of the following: (i) SESA action matrix, (ii) Engagement Plan, (iii) Ethnic Groups Plan; (iv) Environmental and Social Impact Management Plan (ESMP). Annex 7 (p. 183) provides additional details at activity level. Note: This position is also funded under BN 7, 11, 15, 21, 25, 26, 30, 38 and 49
12	70,263	Component 1 Contractual services companies: This budget is reserved to cover the cost of a contractual appointment for: (1) SC1 - Development of GIS and remote-sensing based monitoring system and associated activities, including training, pilot testing in PDAs. The work will focus on technical aspects of implementation of portions of Outputs 1.1, 1.2 and 1.5. Annex 7 (p. 183) provides additional details at activity level. Note: Additional funding for this sub-contract is located under BN 3 and 8.
Component 2		
13	30,000	Component 2 International consultants: (1) Short-term consultants for effective implementation of project safeguards, including preparation of ESIA and related management plans (30 days @ 500 / day = 15,000); (2) Restoration specialist for support to plan development (30 days @ 500 / day = 15,000)

Budget note number	Total per BN, USD (BENIN)	Activity number and input description
14	35,000	Component 2 Local consultants: (1) Short-term consultants for effective implementation of project safeguards, including preparation of ESIA and related management plans (75 days @ 200 / day = 15,000); (2) Short-term technical support to individual restoration actions under Output 2.2 (100 days @ 200 / day = 20,000). Annex 7 (p. 184) provides additional details at activity level
15	126,000	Component 2 Contractual services individual: This budget is reserved to cover the cost of contractual appointment of: (1) PMU1 - Gender & safeguards specialist - 6 months @ $3,000 / month. The work will focus on technical aspects of implementation of gender and other safeguards associated with implementation of Component 2 including implementation of the following: (i) SESA action matrix, (ii) Engagement Plan, (iii) Ethnic Groups Plan; (iv) Environmental and Social Impact Management Plan (ESMP). Annex 7 (p. 183) provides additional details at activity level. Note: This position is also funded under BN 7, 11, 15, 21, 25, 26, 30, 38 and 49 (2) PMU2 - SLM /SFM and climate expert - 36 months @ $3,000 / month = $108,000. The work will focus on technical implementation of Component 2, particularly Outputs 2.1 - 2.3. Annex 7 (p. 195-96) provides additional details at activity level. Note: This position is also funded under BN 21
16	2,885,000	Component 2 Contractual services companies: This budget is reserved to cover the cost of contractual appointment for technical implementation of activities under Outputs 2.1, 2.2, 2.4 and 2.5, as follows: (1) Collection / compilation of necessary data and incorporation into a data management tool covering project PDAs, with associated training for local officials and other stakeholders (Activities 2.1.1 - 2.1.3) = $125,000 (2) Support to participatory planning processes, including: i) LDN and climate components of three PDA Master Plans and ii) eight commune-level plans (Activities 2.1.4 - 2.1.8) = $175,000 (3) Conservation and rehabilitation of priority cropland and conservation of soil fertility (Activity 2.2.2) = $640,000; Approximate breakdown of costs Data collection and analysis, site surveys and mapping to support detailed site and strategy selection - $65,000 Stakeholder consultations re. sites and strategies - $50,000 Soil and vegetation sampling and analysis - $50,000 Labor inputs - $100,000 Material (plant) inputs - $175,000 Management and consulting - $65,000 Meetings / trainings - $40,000 Monitoring - $45,000 Operating costs (fuel, etc.) - $50,000 TOTAL - $640,000 (4) Conservation and restoration of priority forest areas, including classified forests (Activity 2.2.3) = $500,000 Approximate breakdown of costs

Budget note number	Total per BN, USD (BENIN)	Activity number and input description
		Data collection and analysis, site surveys and mapping to support detailed site and strategy selection - $40,000 Stakeholder consultations re. sites and strategies - $40,000 Soil and vegetation sampling and analysis - $40,000 Labor inputs - $80,000 Material (plant) inputs - $145,000 Management and consulting - $50,000 Meetings / trainings - $30,000 Monitoring - $35,000 Operating costs (fuel, etc.) - $40,000 TOTAL - $500,000 (5) Reforestation for riverbank protection (Activity 2.2.4) = $340,000 Approximate breakdown of costs Data collection and analysis, site surveys and mapping to support detailed site and strategy selection - $30,000 Stakeholder consultations re. sites and strategies - $25,000 Soil and vegetation sampling and analysis - $10,000 Labor inputs - $80,000 Material (plant) inputs - $95,000 Management and consulting - $35,000 Meetings / trainings - $20,000 Monitoring - $25,000 Operating costs (fuel, etc.) - $20,000 TOTAL - $340,000 (6) Multi-purpose water reservoirs (Activity 2.2.5) = $300,000 Approximate breakdown of costs Data collection and analysis, site surveys and mapping to support detailed site and strategy selection - $10,000 Stakeholder consultations re. sites and strategies - $20,000 Labor inputs - $130,000 Material (plant) inputs - $70,000 Management and consulting - $30,000 Meetings / trainings - $20,000 Monitoring - $10,000 Operating costs (fuel, etc.) - $10,000 TOTAL - $300,000

Budget note number	Total per BN, USD (BENIN)	Activity number and input description
		(7) Provision of extension services to 24,000 farmers and community leaders (Output 2.4) = $355,000 Approximate breakdown of costs Data collection and analysis, site surveys and mapping to support detailed site and strategy selection - $15,000 Stakeholder consultations re. sites and strategies - $15,000 Soil and vegetation sampling and analysis - $10,000 Material (plant) inputs - $95,000 Management and consulting - $35,000 Meetings / trainings - $120,000 Monitoring - $25,000 Operating costs (fuel, etc.) - $40,000 TOTAL - $355,000 (8) Development of green belt infrastructure (Output 2.5) = $450,000 Approximate breakdown of costs Data collection and analysis, site surveys and mapping to support detailed site and strategy selection - $20,000 Stakeholder consultations re. sites and strategies - $20,000 Soil and vegetation sampling and analysis - $20,000 Labor inputs - $100,000 Material (plant) inputs - $125,000 Management and consulting - $45,000 Meetings / trainings - $50,000 Monitoring - $40,000 Operating costs (fuel, etc.) - $30,000 TOTAL - $450,000 Note: Additional funding for these sub-contracts is available under BN 22.
17	100,000	Component 2 workshops: (1) Workshops for awareness raising and training of 1,000 national and local government and administration officials (including ATDAs, DGEC under MCVDD and DGEFC), parliamentarians and representatives of private sector in climate resilient and degradation neutral planning and policies, with focus on agriculture, animal husbandry and forestry (2) Workshops and meetings to develop plans, including implementation of safeguard protocols
18	25,400	Travel: Mission travel by project staff and short-term technical experts to and from PMU, project sites and Cotonou
19	30,000	Component 2 International consultants: (1) Short-term consultants for effective implementation of project safeguards, including preparation of ESIA and related management plans (20 days @ 500 / day = 10,000); (2) Restoration specialist for support to plan development (40 days @ 500 / day = 20,000)

Budget note number	Total per BN, USD (BENIN)	Activity number and input description
20	35,000	Component 2 Local consultants: (1) Short-term consultants for effective implementation of project safeguards, including preparation of ESIA and related management plans (75 days @ 200 / day = 15,000); (2) Short-term technical support to individual restoration actions under Output 2.2 (100 days @ 200 / day = 20,000)
21	126,000	Component 2 Contractual services individual: This budget is reserved to cover the cost of contractual appointment of: (1) PMU1 - Gender & safeguards specialist - 6 months @ $3,000 / month. The work will focus on technical aspects of implementation of gender and other safeguards associated with implementation of Component 2 including implementation of the following: (i) SESA action matrix, (ii) Engagement Plan, (iii) Ethnic Groups Plan; (iv) Environmental and Social Impact Management Plan (ESMP). Annex 7 (p. 184-5) provides additional details at activity level. Note: This position is also funded under BN 7, 11, 15, 21, 25, 26, 30, 38 and 49 (2) PMU2 - SLM /SFM and climate expert - 36 months @ $3,000 / month = $108,000. The work will focus on technical implementation of Component 2, particularly Outputs 2.1 - 2.3. Annex 7 (p. 195-96) provides additional details at activity level. Note: This position is also funded under BN 15
22	885,000	Component 2 Contractual services companies: This budget is reserved to cover the cost of contractual appointment for technical implementation of activities under Outputs 2.2, 2.4 and 2.5, as follows: (1) Conservation and rehabilitation of priority cropland and conservation of soil fertility (Activity 2.2.2) = $200,000 Approximate breakdown of costs Data collection and analysis, site surveys and mapping to support detailed site and strategy selection - $15,000 Stakeholder consultations re. sites and strategies - $20,000 Soil and vegetation sampling and analysis - $20,000 Labor inputs - $30,000 Material (plant) inputs - $55,000 Management and consulting - $20,000 Meetings / trainings - $15,000 Monitoring - $15,000 Operating costs (fuel, etc.) - $10,000 TOTAL - $200,000 (2) Conservation and restoration of priority forest areas, including classified forests (Activity 2.2.3) = $200,000 Approximate breakdown of costs Data collection and analysis, site surveys and mapping to support detailed site and strategy selection - $15,000 Stakeholder consultations re. sites and strategies - $20,000 Soil and vegetation sampling and analysis - $20,000 Labor inputs - $30,000

Budget note number	Total per BN, USD (BENIN)	Activity number and input description
		Material (plant) inputs - $55,000 Management and consulting - $20,000 Meetings / trainings - $15,000 Monitoring - $15,000 Operating costs (fuel, etc.) - $10,000 TOTAL - $200,000 (3) Reforestation for riverbank protection (Activity 2.2.4) = $185,000 Approximate breakdown of costs Data collection and analysis, site surveys and mapping to support detailed site and strategy selection - $15,000 Stakeholder consultations re. sites and strategies - $10,000 Soil and vegetation sampling and analysis - $10,000 Labor inputs - $50,000 Material (plant) inputs - $50,000 Management and consulting - $20,000 Meetings / trainings - $10,000 Monitoring - $10,000 Operating costs (fuel, etc.) - $10,000 TOTAL - $185,000 (4) Multi-purpose water reservoirs (Activity 2.2.5) = $50,000 Approximate breakdown of costs Labor inputs - $25,000 Material (plant) inputs - $15,000 Management and consulting - $5,000 Meetings / trainings - $5,000 TOTAL - $50,000 (5) Provision of extension services to 24,000 farmers and community leaders (Output 2.4) = $100,000 Approximate breakdown of costs Data collection and analysis, site surveys and mapping to support detailed site and strategy selection - $5,000 Stakeholder consultations re. sites and strategies - $5,000 Soil and vegetation sampling and analysis - $5,000 Material (plant) inputs - $35,000 Management and consulting - $10,000 Meetings / trainings - $20,000

Budget note number	Total per BN, USD (BENIN)	Activity number and input description
		Monitoring - $10,000 Operating costs (fuel, etc.) - $10,000 TOTAL - $100,000 (6) Development of green belt infrastructure (Output 2.5) = 150,000 Approximate breakdown of costs Data collection and analysis, site surveys and mapping to support detailed site and strategy selection - $10,000 Stakeholder consultations re. sites and strategies - $10,000 Soil and vegetation sampling and analysis - $10,000 Labor inputs - $30,000 Material (plant) inputs - $40,000 Management and consulting - $15,000 Meetings / trainings - $15,000 Monitoring - $10,000 Operating costs (fuel, etc.) - $10,000 TOTAL - $150,000 Note: Additional funding for these sub-contracts is located under BN 16.
23	100,000	Component 2 workshops: (1) Workshops for awareness raising and training of 1,000 national and local government and administration officials (including ATDAs, DGEC under MCVDD and DGEFC), parliamentarians and representatives of private sector in climate resilient and degradation neutral planning and policies, with focus on agriculture, animal husbandry and forestry = $50,000 (2) Workshops and meetings to develop plans, including implementation of safeguard protocols = $50,000
24	31,600	Travel: Mission travel by project staff and short-term technical experts to and from PMU, project sites and Cotonou under Component 2
25	18,000	Component 1 Contractual services individual: This budget is reserved to cover the cost of contractual appointment of: (1) PMU1 - Gender & safeguards specialist - 6 months @ $3,000 / month. The work will focus on technical aspects of implementation of gender and other safeguards associated with implementation of Component 2 including implementation of the following: (i) SESA action matrix, (ii) Engagement Plan, (iii) Ethnic Groups Plan; (iv) Environmental and Social Impact Management Plan (ESMP). Annex 7 (p. 184-5) provides additional details at activity level. Note: This position is also funded under BN 7, 11, 15, 21, 25, 26, 30, 38 and 49
Component 3		
26	81,000	Component 3 Contractual services individual: This budget is reserved to cover the cost of contractual appointments of:

Budget note number	Total per BN, USD (BENIN)	Activity number and input description
		(1) PMU1 - Gender & safeguards specialist - 6 months @ $3,000 / month. The work will focus on technical aspects of implementation of gender and other safeguards associated with implementation of Component 2. Annex 7 (p. 184-5) provides additional details at activity level. Note: This position is also funded under BN 7, 11, 15, 21, 25, 26, 30, 38 and 49 (2) PMU3 - Livelihoods specialist / team leader - 18 months @ $3,500 per month = $63,000. The work will focus on technical implementation of Component 3, especially outputs 3.1 and 3.2. Annex 7 (p. 188-89) provides additional details at activity level. Note: This position is also funded under BN 30, 62 and 65
27	354,937	Component 3 Contractual services companies: This budget is reserved to cover the cost of a contractual appointment for: (1) Strengthening of selected value chains (Output 3.2) ($354,937). The work will focus on implementation of Output 3.2. Annex 7 (p. 192) provides additional details at activity level. Approximate breakdown of costs Data collection and analysis, site surveys and mapping to support detailed site and strategy selection - $10,000 Stakeholder consultations re. sites and strategies - $15,000 Post-harvest equipment and infrastructure - $104,937 Labor inputs - $40,000 Material inputs (improved seed varieties) - $65,000 Management and consulting - $35,000 Meetings / trainings - $60,000 Monitoring - $5,000 Operating costs (fuel, etc.) - $20,000 TOTAL - $354,937
28	166,000	Component 3 International consultants: This budget is reserved to cover the cost of contractual appointments of: (1) Safeguards specialists - Short-term consultants for effective implementation of safeguards related to Component 3 (32 days @ 500 / day = 16,000). The work will focus on implementation of all Component 3 outputs. Annex 7 (p. 189) provides additional details at activity level. (2) Value chain specialists (Outputs 3.1 & 3.2)- Mapping and analysis of value chains, development of action plans and support to implementation (200 days @ 500 / day = 100,000). The work will focus on implementation of all Outputs 3.1 and 3.2. Annex 7 (p. 189-90) provides additional details at activity level. (3) Partnerships specialist (Output 3.4) - Development of partnerships (100 days @ 500 / day = 50,000). The work will focus on implementation of all Output 3.4. Annex 7 (p. 190) provides additional details at activity level.
29	81,000	Component 3 Local consultants: (1) Safeguards specialists (All outputs) - Short-term consultants for effective implementation of safeguards related to Component 3 (150 days @ 200 / day = 30,000); (2) Value chain specialists (Outputs 3.1)- Mapping and analysis of value chains,

Budget note number	Total per BN, USD (BENIN)	Activity number and input description
		development of action plans (155 days @ 200 / day = 31,000); (3) Partnerships specialist (Output 3.4) - Development of partnerships (100 days @ 200 / day = 20,000) LDCF
30	81,000	Component 3 Contractual services individual: This budget is reserved to cover the cost of contractual appointment of: ((1) PMU1 - Gender & safeguards specialist - 6 months @ $3,000 / month. The work will focus on technical aspects of implementation of gender and other safeguards associated with implementation of Component 2. Annex 7 (p. 184-5) provides additional details at activity level. Note: This position is also funded under BN 7, 11, 15, 21, 25, 26, 30, 38 and 49 (2) PMU3 - Livelihoods specialist / team leader - 18 months @ $3,500 per month = $63,000. The work will focus on technical implementation of Component 3, especially outputs 3.1 and 3.2. Annex 7 (p. 188-89) provides additional details at activity level. Note: This position is also funded under BN 26, 62 and 65
31	1,493,063	Component 3 Contractual services companies: This budget is reserved to cover the cost of contractual appointments for: (1) Strengthening of selected value chains ($853,063). The work will focus on technical implementation of Output 3.2. Annex 7 (p. 216-217) provides additional details at activity level. Approximate breakdown of costs Data collection and analysis, site surveys and mapping to support detailed site and strategy selection - $20,000 Stakeholder consultations re. sites and strategies - $23,063 Post-harvest equipment and infrastructure - $200,000 Labor inputs - $80,000 Material inputs (improved seed varieties) - $300,000 Management and consulting - $60,000 Meetings / trainings - $120,000 Monitoring - $10,000 Operating costs (fuel, etc.) - $40,000 TOTAL - $853,063 (2) Partnerships for income-generating activities ($338,000) The work will focus on technical implementation of key elements of Output 3.3. Annex 7 (p. 216-217) provides additional details at activity level. Approximate breakdown of costs Specialized technical support for assessing options and leading negotiations with government and banks on loans, loan guarantees - $138,000 Develop several standardized loan packages for communities and cooperatives engaged in climate-resilient and degradation neutral activities - $100,000 Develop and implement training courses for farmer organizations, cooperatives and SMEs - $100,000

Budget note number	Total per BN, USD (BENIN)	Activity number and input description
		(3) Capacity-building of cooperatives ($302,000). The work will focus on technical implementation of Output 3.4. Annex 7 (p. 216-217) provides additional details at activity level. Approximate breakdown of costs Market research and feasibility assessments - $60,000 Support for improved packaging and delivery of new products to market - $172,000 Management and consulting - $25,000 Meetings / trainings - $20,000 Monitoring - $10,000 Operating costs (fuel, etc.) - $15,000 TOTAL - $302,000
32	85,000	Component 3 workshops: (1) Workshops for prioritization and selection of value chains and co-design of action plans; (2) Workshops to develop partnerships; (3) Workshops and meetings to implement safeguard protocols
33	29,837	Travel: Component 3 related mission travel by project staff and short-term technical experts to and from PMU, project sites and Cotonou
34	500,000	Equipment and furniture: Material support to cooperatives for improved crop processing and storage within selected value chains (3.2 & 3.4), including: construction of simple buildings, machinery for cleaning, sorting and packaging of produce
35	18,000	Component 3 Contractual services individual: PMU1 - Gender and safeguards specialist - 6 months @ $3,000 per month
Component 4a - Gender and knowledge management		
36	9,500	Component 4 International consultants: (1) Expert in behavioral change, diffusion of agricultural innovations and climate change - 19 days @ 500 / day = 9,500.
37	40,000	Component 4 Local consultants: (1) Local consultant support for tracking and monitoring of diffusion and related M&E surveys (Output 4.3) - 200 days @ 200 / day = 40,000;
38	54,000	Component 4 Contractual services individual: This budget is reserved to cover the cost of contractual appointment of: (1) PMU1 - Gender & safeguards specialist - 6 months @ $3,000 / month. The work will focus on technical aspects of implementation of gender and other safeguards associated with implementation of Component 2. Annex 7 (p. 184-5) provides additional details at activity level. Note: This position is also funded under BN 7, 11, 15, 21, 25, 26, 30, 38 and 49 (2) PMU4: Knowledge management / M&E specialist - 18 months @ $3,000. The work will focus on technical aspects of implementation of knowledge- and awareness-related elements of Component 4, particularly Outputs 4.3 and 4.4. Annex 7 (p. 203-204) provides additional details at activity level. Note: Knowledge management work done by this specialist is also funded under BN 44, while an additional 30 months of this individual's time, covering M&E activities, are funded under Component 4b (BN 54, 59).
39	60,000	Component 4 workshops: Workshops on gender, replication and learning
40	15,000	Travel: Component 4-related mission travel by project staff and short-term technical experts to and from PMU, project sites and Cotonou
41	49,120	Audio-visual and print production costs: Printing and distribution of learning materials and publications

Budget note number	Total per BN, USD (BENIN)	Activity number and input description
42	7,500	Component 4 International consultants: This budget is reserved to cover the cost of contractual appointment of: (1) Expert in behavioral change, diffusion of agricultural innovations and climate change - 15 days @ 500 / day = 7,500. Annex 7 (p. 196) provides additional details at activity level.
43	22,000	Component 4 Local consultants: (1) Local consultant support for tracking and monitoring of diffusion and related M&E surveys (Output 4.3) (110 days @ 200 / day = 22,000)
44	54,000	Component 4 Contractual services individual: This budget is reserved to cover the cost of contractual appointment of: PMU4: Knowledge management / M&E specialist - 18 months @ $4,000. The work will focus on technical aspects of implementation of knowledge- and awareness-related elements of Component 4, particularly Outputs 4.3 and 4.4. Annex 7 (p. 203-204) provides additional details at activity level. Note: Knowledge management work done by this specialist is also funded under BN 38, while an additional 30 months of this individual's time, covering M&E activities, are funded under Component 4b (BN 54, 59).
45	30,000	Component 4 workshops: Workshops on gender, replication and learning
46	30,000	Travel: Component 4-related mission travel by project staff and short-term technical experts to and from PMU, project sites and Cotonou
47	38,783	Audio-visual and print production costs: Printing and distribution of learning materials and publications
48	45,000	Local consultants: (1) Development of national information, education and communication plan (Activity 4.4.1) - 75 days @ 200 / day = 15,000); (2) Development of communications and public awareness materials (Activity 4.4.2) - 150 days @ 200 / day = 30,000
49	36,000	Component 4 Contractual services individual: This budget is reserved to cover the cost of contractual appointment of: (1) PMU1 - Gender & safeguards specialist - 12 months @ $3,000 / month. The work will focus on technical aspects of implementation of gender and other safeguards associated with implementation of Component 2. Annex 7 (p. 184-5) provides additional details at activity level. Note: This position is also funded under BN 7, 11, 15, 21, 25, 26, 30, 38 and 49
50	32,737	Travel: International mission travel for training and knowledge sharing
51	20,000	Audio-visual and print production costs: (1) Production of educational materials, as called for in IEC (Activity 4.4.1) - 10,000; (2) Production of communications and public awareness materials (Activity 4.4.2) - 10,000
Component 4b - Monitoring and evaluation		
52	25,000	Component 4 International consultants: (1) Project evaluation specialists for mid-term review and final evaluation (50 days @ 500/ day = 25,000);
53	15,000	Component 4 Local consultants: (1) Project evaluation specialists for mid-term review and final evaluation (75 days at 200 / day = 15,000)
54	54,000	Component 4 Contractual services individual: This budget is reserved to cover the cost of contractual appointment of: (1) PMU4: Knowledge management / M&E specialist - 18 months @ $3,000. The work will focus on implementation of monitoring and evaluation aspects of the project. Annex 7 (p. 203-204) provides additional details. Note: M&E related work done by this specialist is also funded under BN 59, while an additional 30 months of this individual's time, covering Knowledge management activities, are funded under Component 4A (BN 38, 44).
55	22,500	Travel: Supervision missions and learning missions

Budget note number	Total per BN, USD (BENIN)	Activity number and input description
56	7,500	Workshops: Project inception workshop
57	25,000	Component 4 International consultants: (1) Project evaluation specialists for mid-term review and final evaluation (50 days @ 500/ day = 25,000);
58	15,000	Component 4 Local consultants: (1) Project evaluation specialists for mid-term review and final evaluation (75 days at 200 / day = 15,000)
59	54,000	Component 4 Contractual services individual: This budget is reserved to cover the cost of contractual appointment of: (1) PMU4: Knowledge management / M&E specialist - 18 months @ $3,000. The work will focus on implementation of monitoring and evaluation aspects of the project. Annex 7 (p. 203-204) provides additional details. Note: M&E related work done by this specialist is also funded under BN 54, while an additional 30 months of this individual's time, covering Knowledge management activities, are funded under Component 4A (BN 38, 44).
60	37,500	Travel: Supervision missions and learning missions
61	7,500	Workshops: Inception workshop
Project management costs		
62	178,200	PMC: Contractual services individuals: This budget is reserved to cover the cost of contractual appointment of: (1) Finance & procurement specialist - 36 months @ 2,000 / month = 72,000. The work will focus on financial and procurement aspects of project management. Annex 7 (p. 180-81) describes specific duties and responsibilities of the position. (2) Admin & finance assistant - 36 months @ 1,200 / month = 43,200. The work will support administrative and financial project management. Annex 7 (p. 181) describes specific duties and responsibilities of the position. (3) PMU3 - Team leader - 18 months @ 3,500/month = 63,000. The work will focus on overall project management. Annex 7 (p. 179) describes specific duties and responsibilities of the position. An additional 36 months of this individual's time, covering livelihoods issues, are described in BN 26 and 30. Note: These positions are also funded under BN 26, 30 and 65
63	19,260	Travel: Project management-related travel by project staff and short-term technical experts between project sites and Cotonou
64	20,000	Equipment and furniture: Office equipment and furnishings for PMU, consisting of: • Office furniture • 3 computers • 3 large monitors • 2 printers • Internet installation
65	178,200	PMC: Contractual services individuals: This budget is reserved to cover the cost of contractual appointment of: (1) Finance & procurement specialist - 36 months @ 2,000 / month = 72,000. The work will focus on financial and procurement aspects of project management. Annex 7 (p. 180-81) describes specific duties and responsibilities of the position. (2) Admin & finance assistant - 36 months @ 1,200 / month = 43,200. The work will support administrative and financial project management. Annex 7 (p. 181) describes specific duties and responsibilities of the position.

Budget note number	Total per BN, USD (BENIN)	Activity number and input description
		(3) PMU3 - Team leader / livelihoods specialist - 18 months @ 3,500/month = 63,000. The work will focus on overall project management. Annex 7 (p. 179) describes specific duties and responsibilities of the position. An additional 36 months of this individual's time, covering livelihoods issues, are described in BN 26 and 30. Note: The above positions / tasks are also funded under BN 26, 30 and 62
66	5,477	Travel: Project management-related travel by project staff and short-term technical experts between project sites and Cotonou
67	20,000	Equipment and furniture: Office equipment and furnishings for PMU, consisting of: • Office furniture • 3 computers • 3 large monitors • 2 printers • Internet installation
68	9,000	Communications and audio equip.: Audio-visual and communications equipment for PMU staff
69	86,400	PMC: Contractual services individuals: Drivers - 3 x 72 months@ 400 / month
70	135,600	Equipment and furniture: Three project vehicles (4x4) & 45,200

X. LEGAL CONTEXT

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

This project will be implemented General Directory of Environment and Climate (DGEC), under the Ministry of the Living Environment and Sustainable Development (MCVDD) ("Implementing Partner") 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.

The designations employed and the presentation of material on this map do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations or UNDP concerning the legal status of any country, territory, city or area or its authorities, or concerning the delimitation of its frontiers or boundaries

XI. RISK MANAGEMENT

1. 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;
   b) assume all risks and liabilities related to the Implementing Partner's security, and the full implementation of the security plan.

2. 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.

3. 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.

4. 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.

   (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").

   (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.

5. 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.

6. 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).

7. 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.

8. 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.

9. 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.

10. 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.

11. 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.

12. 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.

XII. MANDATORY ANNEXES

Annex 1: GEF Budget Template

PENDING

Annex 2: GEF Execution Support Letter

NA

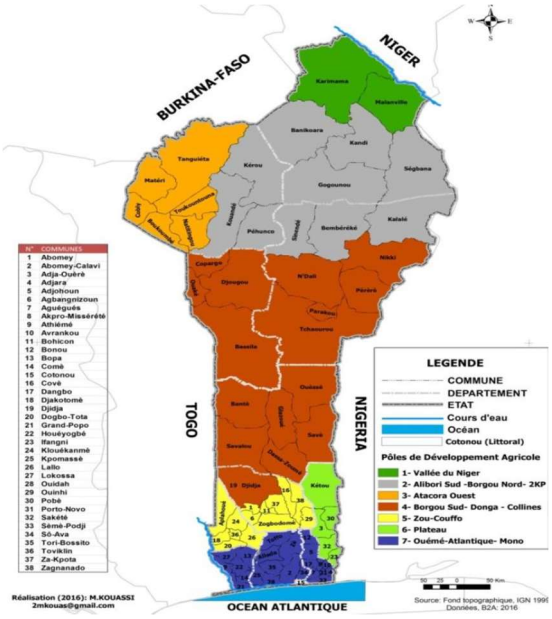
Annex 3: Project map and geospatial coordinates of the project area[91]

Geospatial coordinates of project landscapes are as follows:

- PDA 1 (Karimama-malanville): Between 431724 E and 566045 E, 1263564 N and 1371738 N,
- PDA 2 (Alibori sud, Borgou Nord et 2KP): Between 349698 E and 586104 E, 1096826 N and 1263922 N,
- PDA 5 (Zou COuffo): between 340743 E and 445156 E, 744007 N and 822451 N.

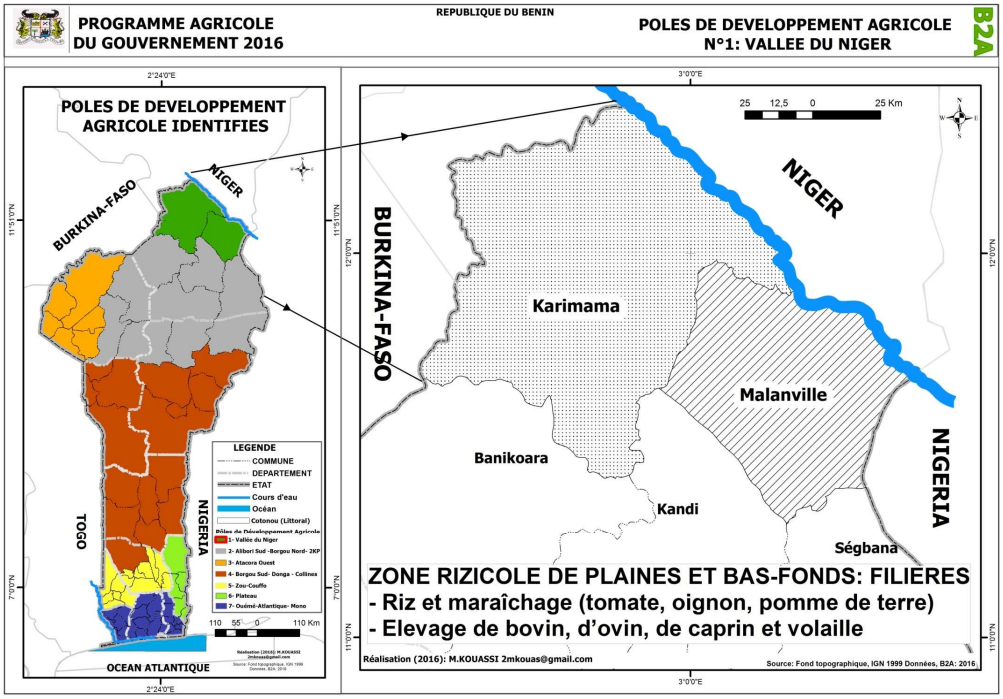
Map 1: The seven Agricultural Development Areas

[Note - Project sites can be found at: a) Karimama is in the **Niger Valley** (green); b) Kouandé, Gogounou and Ségbana in **Alibori Sud-Borgou Nord-2KP** (grey); and c) Za-Kpota, Covè, Klouékanmè and Aplahoué in the north of **Zou-Couffo** (yellow)]

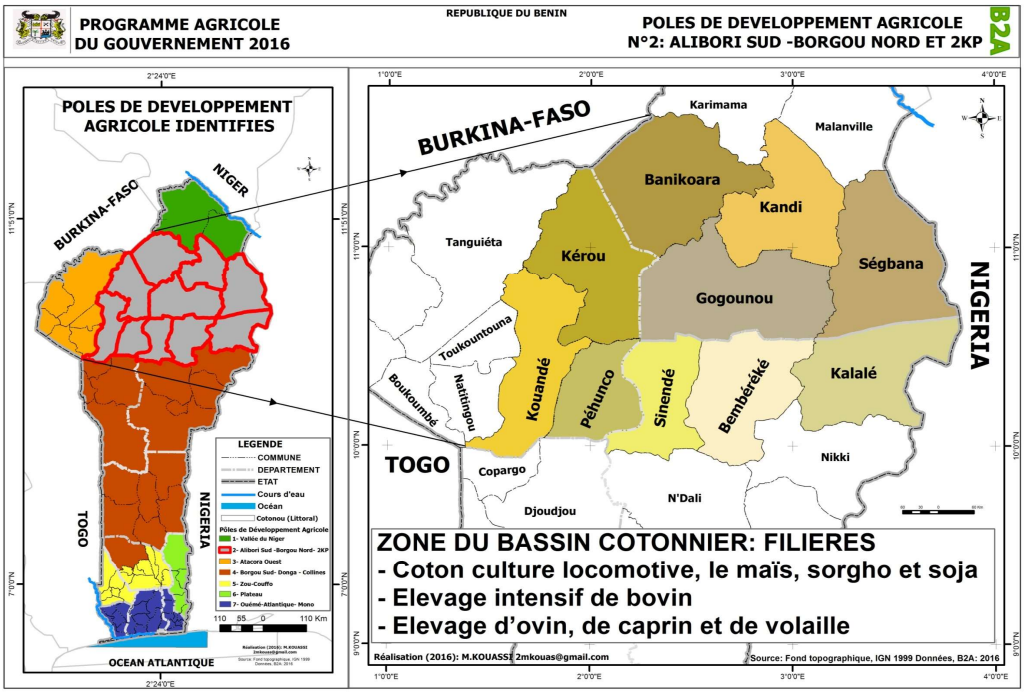


[91] Additional maps are found in Annex 14.6, Site selection

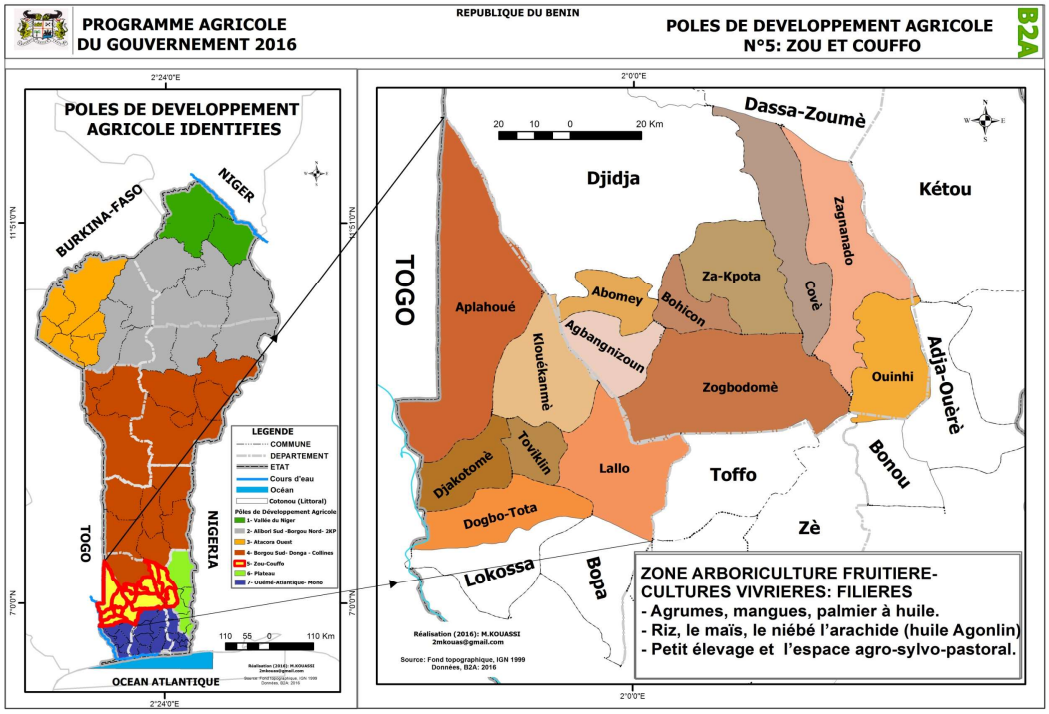
Map 2: Project sites in PDA 1 (Niger Valley: Karimama)



Map 3: Project sites at PDA 2 (Alibori Sud-Borgou Nord-2KP: Kouandé, Gogounou, Ségbana)



Map 4: Project sites in PDA5 (Zou-Couffo: Za-Kpota, Covè, Klouékanmè, Aplahoué)



Annex 4: Multiyear Workplan

Component 1: Political, financial, institutional, and regulatory frameworks to achieve climate risk informed Land Degradation Neutrality (LDN) and advance integration of vulnerability assessments and adaptation options within land use decisions.

Outputs	Indicative activities	YEAR 1				YEAR 2				YEAR 3				YEAR 4				YEAR 5				YEAR 6			
		Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4
Output 1.1: *National LDN and restoration database established within the DGEC under MCVDD, bringing together national data sources including related data on climate impacts, vulnerability, and adaptation needs, and linking to global systems for monitoring restoration and LDN*	1.1.1. Building on work done during PPG, complete detailed assessment of relevant equipment specifications, GIS and spatial analyses and capacity building requirements and provide targeted support to ensure effective participation in the process, particularly within DGEC under MCVDD																								
	1.1.2 Support and strengthen existing national networks for inter-sectoral data sharing on LDN, climate impacts, vulnerability and adaptation, e.g., REDD+ national coordination mechanism, National Committee for Climate Change, Technical Group for Land Degradation, land-use planning ministry and other sectoral ministries																								
	1.1.3 Assess and strengthen existing cartographic databases of land use, particularly agricultural uses, and associated land degradation and ecosystem services																								
	1.1.4 Support the development of improved national baseline maps indicating land and forest status, soil type																								

Outputs	Indicative activities	YEAR 1				YEAR 2				YEAR 3				YEAR 4				YEAR 5				YEAR 6			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
	and soil fertility, as tools for monitoring LDN (see also Activity 2.2.1)																								
	1.1.5 Build capacities for effective use of enhanced databases and maps																								
Output 1.2: National monitoring and reporting system for tracking climate change vulnerability in the agricultural sector and changes in adaptive capacity, land cover change, degradation, restoration and forest ecosystems, and ecosystem services[92]	1.2.1 Develop an observatory for monitoring agricultural dynamics, climate change impacts on agriculture and the vulnerability of forest ecosystems, including climate risks, including agreeing on indicators to be monitored																								
	1.2.2 Pilot testing in three PDAs of an operational system for monitoring agricultural dynamics and the vulnerability of forest ecosystems, based on existing and upgraded cartographic information																								
	1.2.3 Prepare two biennial national reports (2024 and 2026)																								
Output 1.3: The National Committee to Combat Desertification, the National Committee Change and the	1.3.1 Analyze the structure, capabilities, and operating rules of the committees and propose any recommended changes, especially an explicit mandate to address climate change vulnerability and adaptation assessments and policies and to integrate them with LDN and REDD+ mechanisms.																								

92 This will include creation of a national centralized database (housed at the Ministry of the Living Environment and Sustainable Development) that will draw on the various databases at each of the sectors and will result in more streamlined reporting

Outputs	Indicative activities	YEAR 1				YEAR 2				YEAR 3				YEAR 4				YEAR 5				YEAR 6			
		Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4
National REDD+ Committee are strengthened to improve coordination and the ownership and capacity of national authorities to deal with projected climate change risk and sensitivity scenarios	1.3.2 Support annual meetings of the two Committees, expanded as needed to cover CCA, at which a set of common objectives and a work plan for data sharing and other joint actions in support of integrated LDN, REDD+ and CCA policies and actions will be adopted.																								
	1.3.3 Strengthen the technical capacity of ministries and other government agencies through the development of strategy documents (e.g., REDD+ strategy, climate vulnerability assessments and adaptation action plans, regular review of land degradation policies and activities) to contribute to the objectives adopted by the Committees																								
Output 1.4: National environmental funding mechanisms integrate CCA and LDN objectives, and have enhanced capacity to mobilize and manage relevant funding	1.4.1. Develop guidelines for Federal and local Government financing of climate-risk informed SLM, SFM and restoration efforts, and gender-responsive, climate-resilient agriculture, including eligibility criteria for grant or loan financing																								
	1.4.2 Develop a program of climate-risk informed SLM and SFM actions at national level with harmonized financing procedures and integration of environmental, economic and social aspects																								
	1.4.3 Insert an SLM budget line within the mechanism for transferring financial resources to municipalities																								

Outputs	Indicative activities	YEAR 1				YEAR 2				YEAR 3				YEAR 4				YEAR 5				YEAR 6			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Output 1.5: Training and equipment provided to key agencies (DGEC under MCVDD, National Geographic Institute, Directorate of Remote Sensing and Ecological Monitoring, National Institute of Agricultural Resources) to improve implementation of climate risk informed and resilient SLM technologies and conservation of production landscapes, with improved coordination and monitoring of climate change impacts, land degradation trends, restoration, and	1.5.1 Implement a training program for actors for key organizations, including DGEC under MCVDD, Directorate of Remote Sensing and Ecological Monitoring, National Geographic Institute, National Institute of Agricultural Resources, etc.																								
	1.5.2 Carry out multi-criteria climate change risk and SLM assessments, taking into account synergies and comparative advantages on the environment																								
	1.5.3 Provide necessary equipment to the National Geographic Institute and the Directorate of Remote Sensing and Ecological Monitoring to support their forest cover monitoring functions																								
	1.5.4 Provide capacity building support (equipment and training) to Ministries and research institutions to enable management of 'the databases'																								
	1.5.5 Implement training programs to access, interpret and use climate scenarios and vulnerability assessments, and especially to adapt them to local conditions through downscaling and through locally collected data based on observations and interviews.																								

Outputs	Indicative activities	YEAR 1				YEAR 2				YEAR 3				YEAR 4				YEAR 5				YEAR 6			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
sustainable forest management																									

Component 2: Restoration of land and forest ecosystems for improved agricultural productivity, prevention of deforestation, and enhanced climate resilience of vulnerable communities[93]

Outputs	Indicative activities	YEAR 1				YEAR 2				YEAR 3				YEAR 4				YEAR 5				YEAR 6			
		Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4
Output 2.1: Integrated climate risk, land use, landscape restoration, and forest management plans, which incorporate climate scenario-based hazards and likely impacts, are developed, with climate change scenarios informing risks and selection of adaptation options, and developed and operationalised at target sites[94]	2.1.1 Build capacity for data collection on multiple climatic, biophysical and agro-ecological variables and participatory, scenario-based analysis to support local level planning for both climate change adaptation and land degradation neutrality.																								
	2.1.2 Field-level, participatory, survey-based data collection within the eight target communes to support climate risk and LDN analyses																								
	2.1.3 Work with the cartographic division of DGERC to integrate readily available, regional downscaled climate scenarios to create a spatially explicit dataset on climate hazards and map potential risks for land use and land cover change in the eight communes, where available use crop and plant habitat suitability models for common species, to																								

93 Management Plans exist for Parc W, the Pendjari Complex, and Classified Forests in Benin. However, the capacity of responsible agencies to implement these Management Plans needs to be strengthened. To fortify the Green Belt and exercise control over agricultural development, targeted efforts will be required to develop nurseries for trees to replant in forest corridors where agricultural production occurs. Agriculturalists will receive training on sustainable land management techniques, landscape restoration and climate resilient agricultural techniques, including promotion of organic cultivation and increasing use of organic compost and pesticide control.

94 The existing management plans will be reviewed and, where necessary, updated so that they include climate change vulnerability and adaptation options, LDN, soil and water conservation, as well as sustainable forest management concerns.

Outputs	Indicative activities	YEAR 1				YEAR 2				YEAR 3				YEAR 4				YEAR 5				YEAR 6			
		Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4
	inform SLM/SFM and land use planning, to inform the process for identifying climate-resilient value chains with local participation (Component 3)and develop up-to-date and improved land use, land degradation, soil fertility, climate hazard and risk-informed spatial analysis and zoning maps of the overall intervention area, i.e. eight target communes, together covering 2.2 million ha.																								
	2.1.4 Conclude data sharing agreements amongst sectoral Ministries and national and local organisations																								
	2.1.5 Develop LDN scenarios and LDN neutrality targets—based on a multi-criteria analysis of sustainable land management, restoration actions and climate hazards and non-climate risk analyses—and mainstream into emerging PDA Master Plans, with additional details for the participating communes																								
	2.1.6 Support the incorporation of LDN and climate change aspects eight commune-level integrated, spatially explicit planning documents—"Schéma																								

Outputs	Indicative activities	YEAR 1				YEAR 2				YEAR 3				YEAR 4				YEAR 5				YEAR 6			
		Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4
	directeur d'aménagement de la commune" (SDAC) and "plan de développement communal" (PDC)																								
	2.1.7 Build validated, multi-dimensional local plans that are aligned with existing SDACs and PDCs, and that can be easily integrated within the SDACs and PDCs, supported by recognized local governance structure																								
	2.1.8 Mainstream climate change hazards, risks and adaptation options informed SLM and SFM into eight commune-level Land Management Plans (PIGUS), including capacity-building strategies																								
	2.1.9 Conduct climate risk assessments for ecosystem based adaptation[95] using the climate hazards dataset (2.1.1), integrate relevant modeled outputs from GEF-CI SPARC and participatory input from communities to identify cost effective and locally relevant adaptation measures in order to																								

[95] Using, for example, the GIZ – UNU guidance to practitioners (2018).

Outputs	Indicative activities	YEAR 1				YEAR 2				YEAR 3				YEAR 4				YEAR 5				YEAR 6			
		Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4
	update management plans for the classified forests of Sota, Mékrou and Kouandé to include climate change scenarios and adaptation measures and sustainable land management, in line with commune-level plans, along with soil conservation and LDN plans for the classified forests of Alibori Supérieur and Trois Rivières																								
Output 2.2: Degraded lands amounting to at least 15,000 hectares, and at least 15,000 hectares of forest are under climate risk informed and resilient restoration and functional and sustainable management regimes	2.2.1 Identify exact locations for land and forest restoration and sustainable management, building on PPG site selection process and incorporating additional climate scenarios and risk mapping work undertaken under 2.1.1 and 2.1.8, as well as nature of restoration or SLM/ SFM approach. (Note: Site selection will take into consideration climate risks (risk maps produced under 2.1.1) and opportunities to reduce them (e.g. by restoring erosion prone slopes and riparian forests), based on climate risk models and hazard maps and risk models.																								
	2.2.2 Provide extension and material support (e.g.,																								

Outputs	Indicative activities	YEAR 1				YEAR 2				YEAR 3				YEAR 4				YEAR 5				YEAR 6			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
	equipment, seedlings, compost and other inputs) for conservation and improvement / restoration of cropland and conservation of soil fertility in identified priority locations (see 2.2.1) and in line with plans developed under activities 2.1.2 - 2.1.4 above																								
	2.2.3 Provide extension and material support (e.g. equipment, seedlings and materials for the plant nurseries) for conservation and improvement / restoration of forest areas and conservation of soil fertility in identified priority locations (see 2.2.1) and in line with plans developed under activities 2.1.5 and 2.1.6 above, including enriching and developing protection series / green belt in the classified forests of Alibori Supérieur, Trois Rivers, Sota, Mékrou and Kouandé with versatile forest species with high tolerance to droughts and floods.																								
	2.2.4 Protect the banks of the Ouémé, Zou and Couffo river basins against erosion through reforestation of 1,000 hectares																								

Outputs	Indicative activities	YEAR 1				YEAR 2				YEAR 3				YEAR 4				YEAR 5				YEAR 6			
		Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4
	of riparian forest using native species with high tolerance to drought and floods, in line with plans developed under Activities 2.1.5 and 2.1.6																								
	2.2.5 Establish multi-purpose water reservoirs to facilitate access to clean water (particularly for select water-saving crops and value chains), by, and avoid conflict among, agricultural producers, livestock breeders and migrant and other vulnerable populations																								
Output 2.3: Awareness raising and training of 1,000 national and local government and administration officials (including ATDAs, DGEC under MCVDD and DGEFC1), parliamentarians and representatives of private sector in climate resilient and degradation neutral planning and policies, with focus on agriculture, animal husbandry and forestry, targeting the mainstreaming of CCA and	2.3.1 Development of capacity building modules and materials, based on international experience, with specific adaptations for conditions in Benin as well as further specifications by PDA, covering: (i) integration of SFM and SLM in projects, business plans, laws and sector strategies; (ii) soil fertilization technologies; (iii) technologies for restoring degraded lands; (iv) approaches to maintaining soil fertility and respecting degradation neutrality standards; (v) Climate vulnerability and risk assessments through a																								

Outputs	Indicative activities	YEAR 1				YEAR 2				YEAR 3				YEAR 4				YEAR 5				YEAR 6			
		Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4
LDN in all policies and administrative decisions.	combination of use of climate scenarios and local experiences and observations to inform the selection of crop and tree species and varieties, planting dates, soil management practices to increase water availability to crops (e.g. mulching), irrigation practices, crop diversification, provision of climate resilient crop varieties, etc.; (vi) methods of soil water conservation, (vii) safeguarding farms against risks (infestations, flooding, bush and vegetation fires, etc.); (viii) protection of forests against brush fires; (ix) cultivation technologies and fodder storage; (x) approaches and standards for forest management and the establishment of carbon sinks and protective belts; (xi) techniques for collecting and processing agricultural and forestry seeds; (xii) approaches and production methods of agricultural and forestry plants in a context of climate change, etc.																								
	2.3.2 Delivery of training modules and materials to at least 1,000 national and local																								

Outputs	Indicative activities	YEAR 1				YEAR 2				YEAR 3				YEAR 4				YEAR 5				YEAR 6			
		Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4
	government and administration officials (including ATDAs, DGEC under MCVDD and DGEFC), parliamentarians and private sector representatives																								
	2.3.3 Awareness raising seminars, workshops and information materials provided to decision-makers and other officials																								
Output 2.4: Extension services in climate resilient and degradation neutral agriculture, animal husbandry and agroforestry provided to 24,000 farmers and community leaders (50% women), including on climate resilient and degradation neutral cotton production.	2.4.1. Through a participatory process including stakeholder mapping, the participatory mapping of climate hazards and risks, and land degradation vulnerability as perceived locally in combination with available data, identify local priorities and action plans for the promotion of climate resilient and degradation neutral agricultural, livestock and agroforestry practices and organize user groups (including women and youth groups) for each identified activity.																								
	2.4.2. Implement intensive training and extension programs in the pilot communities, led by local NGOs in partnership with community-based groups and under the guidance and																								

Outputs	Indicative activities	YEAR 1				YEAR 2				YEAR 3				YEAR 4				YEAR 5				YEAR 6			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
	supervision of government extension services. Considering the high number of illiterate people (especially women) in the rural population especially in the north of the country, extension methods will rely on face-to-face meetings rather than printed communication tools or social media.																								
	2.4.3. Develop radio programs on a range of climate change and land degradation topics, identified by a local advisory committee, and emit them in the most common local languages.																								
	2.4.4. Provide local groups with the essential tools and inputs for climate resilient agriculture and land restoration, such as farm tools, supplies for village nurseries, seedlings, etc.																								
Output 2.5: Strengthened Green Belt infrastructure against the advance of the desert in the north of Benin	2.5.1. Disseminate existing technical guidance materials developed by other initiatives (e.g. PROSOL) relating to "Integrated management of soil fertility", "soil and water conservation", "conservation																								

Outputs	Indicative activities	YEAR 1				YEAR 2				YEAR 3				YEAR 4				YEAR 5				YEAR 6			
		Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4
	agriculture" and "agroforestry and individual forests"																								
	2.5.2. Establish at least 200 ha of commercial plantations (150 ha of forest species and 50 ha of forage species)																								
	2.5.3. Support local communities to establish at least 100 ha of communal and individual fruit plantations																								
	2.5.4 Promote arboriculture as well as the vegetated delineation based on palm trees (rônier), néré and shea trees, which are all highly resilient to climate variability and drought and even support occasional fire, as a means of diversifying farming systems thereby reducing risks related to a largely unpredictable climate future.																								
	2.5.5. Promote the use of soil improving plants, e.g. mucuna, pigeon pea (*cajanus cajan*); and *Vigna radiata* for the restoration of degraded agricultural sites (noting that pigeon pea has been used in the West African savanna for many years and is noteworthy for its positive influence on associated food																								

Outputs	Indicative activities	YEAR 1				YEAR 2				YEAR 3				YEAR 4				YEAR 5				YEAR 6			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
	crops (e.g. maize) as well as a producer of edible seeds and fodder.																								

Component 3: Building diversified income-generating activities and value chains to strengthen community resilience to climate change.

Outputs	Indicative activities	YEAR 1				YEAR 2				YEAR 3				YEAR 4				YEAR 5				YEAR 6			
		Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4
Output 3.1. Five agricultural and agro-forestry value chains are identified and assessed according to their potential to be climate resilient and deliver multiple local, national and global benefits, including income generation, LDN benefit and enhanced adaptive capacity within project PDAs	3.1.1 Map the short-listed value chains																								
	3.1.2 Undertake surveys within potential beneficiary communities to assess preferences among alternative value short-listed chains																								
	3.1.3 Select five priority value chains, based on pre-determined selection criteria and with reference to PDAs																								
	3.1.4 Prepare five value chain analyses, including priority measures needed to strengthen climate resilience. These should include, inter alia: (i) good practices and associated technologies for the storage / conservation and processing of various products (plants, animals, fisheries and forestry, etc.); (ii) the potential contribution of each product / value chain in terms of climate resilience, zero degradation or restorative production and gender-balanced income																								

Outputs	Indicative activities	YEAR 1				YEAR 2				YEAR 3				YEAR 4				YEAR 5				YEAR 6			
		Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4
	generation; (iii) specific barriers and opportunities associated with each value chain; (iv) climate change impact assessment across all priority value chains to identify the adaptation measures to reduce risks of climate related losses and damages																								
	3.1.5 Develop an action plan for strengthening each value chain																								
Output 3.2: Selected climate resilient and sustainable agricultural and agroforestry practices and market channels are strengthened through investments and extension support for climate resilient agricultural practices, leading to triple-bottom-line benefits, strengthened adaptive capacity of vulnerable communities, job and SMME creation	3.2.1 Deliver training to strengthen agricultural skills related to the selected products, including: (i) techniques for managing soil fertility and (ii) climate-resilient agricultural practices																								
	3.2.2 Improve access to information and to appropriate post-harvest processing and storage equipment and infrastructure, at different levels of the marketing chain, to help processors better respond to quantitative and qualitative aspects of market demand																								
	3.2.3 Contribute to the sustainable intensification of																								

Outputs	Indicative activities	YEAR 1				YEAR 2				YEAR 3				YEAR 4				YEAR 5				YEAR 6			
		Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4
	production in the selected sectors by supporting the adoption of improved technologies adapted to the needs of farmers, in particular women, and enabling them to better respond to market signals																								
	3.2.4 Support efforts by cooperatives to strengthen crop processing and storage																								
Output 3.3: Local, national, regional and international partnerships developed to support and promote 'forest-friendly' and climate resilient income-generating opportunities	3.3.1 Develop partnership with micro-financing institutions to increase the flow of financial services (campaign credit, equipment credit, etc.) to encourage adoption of SLM and SFM practices. The project will work with commercial credit institutes and government on the possibility of designing standardized loan packages for communities and cooperatives engaged in climate-resilient and degradation neutral activities such as certain agroforestry value chains, small livestock production, etc. that would be accompanied by extension																								

Outputs	Indicative activities	YEAR 1				YEAR 2				YEAR 3				YEAR 4				YEAR 5				YEAR 6			
		Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4
	services to reduce the risks of default.																								
	3.3.2 Establish partnerships with local communities, NGOs, forest department directorates, and ATDAs to train farmers and ranchers (particularly women), in climate resilient agriculture. This activity would focus on the creation and strengthening of land user, processor and trader groups and cooperatives that would work under the supervision and with the support of the responsible government agencies (e.g. forestry) and civil society organizations, thereby increasing their access to credit, technical support and markets, and reducing risks for individuals and families engaged in agricultural and forestry production, processing and trade. This would also include the organization of savings groups within communities to cover smaller investment needs or complement external loans.																								

Outputs	Indicative activities	YEAR 1				YEAR 2				YEAR 3				YEAR 4				YEAR 5				YEAR 6			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
	3.3.3 Initiate a national dialogue (Government, financial sector, NGOs) on de-risking mechanisms to provide loan guarantees for micro-projects for land degradation neutral (or regenerative) and climate resilient income-generating opportunities. This would build on climate risk assessments of value chains to identify relatively low-risk land use options and would engage with national and local governments, the private sector and civil society organizations active in the area on the possibility of creating partial guarantees for loans and investments in degradation-neutral and climate-resilient land uses and value chains. This discussion is rather new in Benin and therefore the immediate objective of the project would be to create a discussion forum for de-risking needs and potential mechanisms and sensitize government and other actors for the issues involved																								

Outputs	Indicative activities	YEAR 1				YEAR 2				YEAR 3				YEAR 4				YEAR 5				YEAR 6			
		Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4
Output 3.4: Strengthened cooperatives and farmer organizations and negotiated partnerships with traders and processors for farmers and communities practicing climate resilient, zero degradation agriculture and agroforestry	3.4.1 Develop market research and feasibility assessment for new products based on the "Market Analysis and Development (ADM)" approach and in consultation with potential beneficiaries																								
	3.4.2 Organize initial meetings between buyers and sellers, and trade shows and exchange trips in the West and Central African sub region and / or support the participation of local producer groups (including cooperatives) in such meetings																								
	3.4.3 Support improved packaging and delivery of new products to market																								
	3.4.4 Support identification of new business partners for SMEs																								

Component 4: Gender Empowerment, Knowledge Management, and M&E.

Outputs	Indicative activities	YEAR 1				YEAR 2				YEAR 3				YEAR 4				YEAR 5				YEAR 6			
		Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4
Output 4.1: Gender empowerment strategy is implemented and guides project implementation.	4.1.1 Raise awareness among project stakeholders regarding the goals, activities and objectives of the gender action plan																								
	4.1.2 Monitoring and adaptive management of implementation of the gender action plan to ensure that it is meeting its objectives																								
Output 4.2: Participatory M&E and quantification of LDN and CCA implementation—including restoration, SFM and SLM actions—as a contribution to national reporting under the UNFCC and other international commitments	4.2.1 Strengthen capacities, particularly among women and young people, to contribute to monitoring and evaluation of interventions for the sustainable and climate-resilient management of land and forest ecosystems at the local, municipal and PDA levels (1, 2, and 5)																								
	4.2.2 Pilot testing of a system of participatory monitoring, review and verification (MRV) of land and forest degradation, climate vulnerability and adaptation needs, potential risks and likely impacts																								

Outputs	Indicative activities	YEAR 1				YEAR 2				YEAR 3				YEAR 4				YEAR 5				YEAR 6			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
	4.2.3 Implement a system of monitoring changes in livelihood status and adaptive capacity for vulnerable people targeted																								
	4.2.4 Obtain agreement between project stakeholders and sectoral decision makers at the national level on simple indicators, applicable to all sectors, linked to integrated, gender sensitive, sustainable responses to climate change																								
	4.2.5 Produce reports estimating LDN implementation across the three PDAs, integrating data gathered by participatory and other means																								
Output 4.3: A learning and dissemination network developed and implemented in each of the three PDAs	4.3.1 Monitoring and assessment of project impacts and associated lessons emerging																								
	4.3.2 Based on project results / demonstrations, develop and implement a training and dissemination plan aimed at women's groups and mixed farmers'																								

Outputs	Indicative activities	YEAR 1				YEAR 2				YEAR 3				YEAR 4				YEAR 5				YEAR 6			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
	organizations to support the further uptake of implementing technologies for the restoration of natural ecosystems, innovation in soil water conservation, etc.																								
	4.3.3 Develop and disseminate technical guidance on adoption of climate resilient value chains integrating climate risks, to enhance productivity and climate resiliency of targeted value chains and agroforestry systems																								
	4.3.4 Organize networking sessions to share experiences between the intervention municipalities on the one hand, and other municipalities within the three PDAs																								
	4.3.5 Strengthen the capacities of women, young people and small producers in the management of digital tools (financial, digital education, e-commerce,																								

Outputs	Indicative activities	YEAR 1				YEAR 2				YEAR 3				YEAR 4				YEAR 5				YEAR 6			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
	etc.) for better climate resilience																								
	4.3.6 Organize exchange trips / visits between PDAs and capacity building for the benefit of stakeholders on SLM/SFM																								
Output 4.4: National-level communications and public awareness program, incorporating lessons learned by the project, including through participatory monitoring and gender empowerment, is developed and implemented at national, regional and international levels	4.4.1 Develop a national information, education and communication (IEC) plan targeting all relevant actors, including, inter alia: (i) educational materials in order to increase knowledge and awareness among educators and to encourage teaching sessions in secondary schools and universities on Land Degradation Neutrality and climate change adaptation; (ii) an inclusive dialogue platform between scholars, customary and religious authorities, vulnerable groups and representatives of sectoral ministries around the inclusive management of natural ecosystems for climate resilience and LDN																								
	4.4.2 Produce gender-sensitive communications																								

Outputs	Indicative activities	YEAR 1				YEAR 2				YEAR 3				YEAR 4				YEAR 5				YEAR 6			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
	and public awareness materials, e.g. leaflets, posters, flyers, brochures, summaries, videos, local radio spots, phone app, etc.)																								
	4.4.3 Conduct briefings with target groups on project experience, as well as best practices and lessons learned, on topics such as gender and LDN, climate change resilience, etc																								
	4.4.4 Organize a series of physical and virtual exchanges—e.g. visits, workshops, knowledge products—with counterpart project team and stakeholders in neighboring Togo																								
Output 4.5 Project monitoring and evaluation are ensured	4.5.1. Project Inception Workshop																								
	4.5.2. Implementation of Monitoring and Evaluation Framework for the Project																								
	4.5.3. Mid-term review																								
	4.5.4. Terminal evaluation																								

Annex 5: UNDP Social and Environmental Screening Procedure (SESP)

Social and Environmental Screening Template (2021 SESP Template, Version 1)

The completed template, which constitutes the Social and Environmental Screening Report, must be included as an annex to the Project Document at the design stage. Note: this template will be converted into an online tool. The online version will guide users through the process and will embed relevant guidance.

Project Information

Project Information	
1. Project Title	Restoring and Enhancing the Value of Degraded Lands and Forest Ecosystems for Enhanced Climate Resilience in Benin (PIRVaTEFoD-Benin)
2. Project Number (i.e. Atlas project ID, PIMS+)	GEF Project ID number: 10688
3. Location (Global/Region/Country)	Benin
4. Project stage (Design or Implementation)	Design
5. Date	September 2021

Part A. Integrating Programming Principles to Strengthen Social and Environmental Sustainability

QUESTION 1: How Does the Project Integrate the Programming Principles in Order to Strengthen Social and Environmental Sustainability?
Briefly describe in the space below how the project mainstreams the human rights-based approach

The project will assist the Government of Benin to achieve the National Land Degradation Neutrality (LDN) targets through sustainable land and forest management practices while strengthening the climate resilience of vulnerable populations, in the Niger Valley, Alibori Sud-Borgou Nord-2KP and Zou-Couffo Agricultural Development Areas. The Agricultural Development Areas were recently created, each with their own Territorial Agricultural Development Agency across 12 Decentralized Departments for Agriculture, Livestock and Fisheries. The principal project partners will be the ATDA structures at the targeted sites and the project will assist these Agencies, and relevant and selected multi-sectoral, multi-party forums that have been created at national, district and local levels **to** implement planned agricultural reforms. The proposed target sites are located in three of these seven Agricultural Development Areas (PDAs 1, 2 and 5) and include community farmers as well as private forest concessions and plantations.

This project intends to: i) promote sustainable and climate resilient production systems in land degradation and deforestation hotspots in Benin, ii) facilitate implementation of green infrastructure to strengthen the green belt as a nature based solution against desert advancement and support climate change adaptation in the north of the country, iii) strengthen the protection and preservation of forest ecosystems located in large agricultural production basins, iv) increase productivity and competitiveness of the horticultural sectors and promotion of climate resilient value chains, and v) facilitate the mobilization of innovative financing and the involvement of private sector for the scaling up and sustainability of climate resilient agriculture, sustainable land and forest management. It will be carried out at national, communal, and local site levels where degraded lands have been targeted for improved land management practices to achieve Benin's LDN goals and meet its NDC objectives for climate change adaptation. The project will engage actively with stakeholders, including communities living in and around the project sites, to improve land use management and promote climate resilient agricultural practices. Any community livelihood options that involve investment by the private sector will ensure that community rights are respected and enhanced.

The project will take into consideration the human geography in the project areas, considering the different groups who are living there and who are accessing the natural resources, especially land and forests, but also water sources (an important element highlighted during stakeholder consultation). The socio-cultural landscape in Benin is characterized by a large number of ethnic groups, involved in different economic activities, such as agriculture and livestock-raising. Access to natural resources is managed by various mechanisms that will be taken into consideration during the project's implementation, ensuring that all the stakeholders – especially vulnerable and marginalized people – have the opportunity to enjoy their rights, through procedures and standards being put in place by the project. The project will focus also on the involvement of youths, who have been identified as key stakeholders, and on the relations between stakeholders, that are based on existing socioeconomic and cultural dynamics.

The above dynamics are important elements underpinning a human rights-based approach, which will be mainstreamed especially thanks to the activities planned under components 3 (Building diversified income-generating activities and value chains to strengthen community resilience to climate change) and 4 (Gender Empowerment, Knowledge Management and M&E), but it is well integrated in all the projects components.

Briefly describe in the space below how the project is likely to improve gender equality and women's empowerment

A Gender Analysis has been conducted during the PPG phase, in accordance with UNDP standards and procedures, to identify the differences, needs, roles and priorities of women and men as they relate to engagement in SLM, BDFAP (Biodiversity-Friendly Agricultural Practices) and conservation of agrobiodiversity. For example, Components 2 and 3 will involve women and men in the farming activities that promote sustainable land management and climate resilience while generating income for local communities. The Project Document provides a detailed plan to ensure that men and women have equal opportunities for participation. The project will target women and women's groups to mainstream their participation in local initiatives and particularly in interventions aimed at generating income. The results of the Gender Analysis conducted are integrated into project implementation to ensure that gender-based differences are built into project activities as appropriate. To monitor success, gender-disaggregated data will be collected against the indicators. The project is assigned the gender marker GEN-2, indicating that gender equality is incorporated as a 'significant objective' during project design and implementation.

During the PPG phase, a Gender Action Plan, based on the Gender Analysis, has been developed. Specific activities have been incorporated into the Project Document to help the project deliver a gender-transformative approach. The Gender Analysis and Action Plan, based on secondary and primary data collection and analysis, includes key elements of a gender approach, such as a context analysis done through the lens of ethnicity, that is a strong component of the power relations among individuals and between groups in the project areas. The project is taking into consideration the household's structure and the role of women and young girls in Benin's society. The project aims to strengthen the participation of women during all the phases of the Project cycle.

The project activities and the Stakeholder engagement plan have been designed taking into consideration the need of ensure security to women and the neeed of mitigate and avoid any possible conflict related to access to land that can especially affect women.

The project will improve gender equality and women's empowerment especially through activities planned under component 3 (Building diversified income-generating activities and value chains to strengthen community resilience to climate change) and 4 (Gender Empowerment, Knowledge Management and M&E); however, the gender sensitive approach is strongly integrated in all project components.

Briefly describe in the space below how the project mainstreams sustainability and resilience

Benin has joined the land degradation neutrality (LDN) process and has committed to achieving the goal of zero net land loss by 2030 in order to preserve terrestrial and aquatic ecosystems. Benin's NDC clearly indicates an awareness of, and commitment to, addressing the needs for adapting the agricultural sector to climate change impacts. The project is designed as an integrated LDN project that aims to reverse current trends in land and ecosystem degradation in the Niger Valley, Alibori Sud-Borgou Nord-2KP and Zou-Couffo Agricultural Development Areas of Benin, while mainstreaming LDN imperatives, building adaptive capacity to enhance climate change resilience, and implementing dynamic local resilience, land restoration, and improved livelihoods for communities in the target areas. Climate change adaptation and reversing land degradation are interconnected; for example, many climate resilient agricultural practices contribute to improving soil fertility, reducing soil erosion, and restoring ecosystem services through restoration and regeneration of ecosystems. Achieving LDN in Benin will require an integrated approach to address the various causes of land degradation taking place at the project sites, which also undermine the ability of vulnerable populations to adapt to climate impacts, including: i) desert encroachment in the north, ii) agricultural expansion at the expense of natural ecosystems in all areas of agricultural production, iii) uncontrolled exploitation of quarries in the south-west; and (iv) poor agricultural practices in large agricultural areas.

The project is in line with UNDP objectives to strengthen the resilience of societies to the impact of shocks, disasters, conflict and emergency situations, to implement the sustainable management, conservation and rehabilitation of natural habitats (and their associated biodiversity and ecosystem functions), and to develop and implement sustainable development pathways. The project will address poverty and inequality and will reduce vulnerabilities while maintaining and enhancing natural capital.

The project will raise awareness on risks related to climate change and natural disaster, promote sustainable solutions that will respect the sociocultural and economic landscapes, enhance livelihood practices already developed in the project areas and ensure that practices are adapted to the challenges the country and the population will face in terms of access to natural resources and use of land.

Sustainability will be ensured through knowledge of the local context, of the communities needs and thanks to the involvement of stakeholders since the beginning of the project cycle.

The project strongly supports the reduction of people's vulnerability to the impacts of climate change.

Sustainability and resilience are mainstreamed through all the project's components.

Briefly describe in the space below how the project strengthens accountability to stakeholders

The project, in line with UNDP principles, promotes accountability to stakeholders by: (i) enabling active local community engagement and participation in decision-making, particularly those at risk of being left behind; (ii) ensuring transparency of interventions through provision of timely, accessible and functional information regarding supported activities, including on potential environmental and social risks and impacts and management measures; (iii) ensuring stakeholders can communicate their concerns and have access to rights-compatible complaints redress processes and mechanisms; and (iv) ensuring effective monitoring—and where appropriate, participatory monitoring with stakeholders—and reporting on implementation of social and environmental risk management measures.

In particular, a Stakeholder Engagement Plan, a Grievance Redress Mechanism, a Gender Action Plan, an Ethnic Groups Planning Framework (IPPF) and an Ethnic Groups Plan will put in place a mechanism that will ensure the accountability to stakeholders.

The Ethnic Groups Planning Framework (included in the ESMF) is adapted to the local context. Ethnic groups in Benin can be included in the UNDP definitions, considering these are groups that "have tried to maintain its distinct group identity, languages, traditional beliefs, customs, laws and institutions, worldviews and ways of life". , For this reason, the Ethnic Groups Plan will be developed during the project's implementation, using the UNDP Indigenous Peoples Plan format.

An Ethnic Groups Plan will be prepared for each PDA by the first project year, based on the risk assessment, in line with the UNDP SES. No relevant project activities that can affect indigenous peoples rights will begin until this plan has been drafted, disclosed (in line with UNDP's policy), approved by the Project Steering Committee, and its measures put in place.

Accountability to stakeholders includes all the mechanisms and systems identified to collect feedback from project beneficiaries and project stakeholders and integrate this feedback into project's design, monitoring and evaluation.

The project includes all the elements of the Accountability to stakeholders: Stakeholder engagement and response mechanism, Monitoring, Reporting and Compliance and Access to Information.

The monitoring process will involve stakeholders - such as affected communities, independent experts, and CBOs/NGOs - to complement or verify the monitoring activities.

The project's Stakeholder engagement plan identifies the different ways of involving stakeholders, such as information, communication, consultation, and direct involvement in project activities.

All these processes will be reported – through the most appropriate mechanism, adapted to the local context – and will be part of project monitoring and reporting processes.

Accountability to stakeholders is one of the most important dimensions integrated in the project's M&E process. This step will ensure the sustainability of the intervention.

The project strengthens accountability to Stakeholders through all the project's components.

Part B. Identifying and Managing Social and Environmental Risks

QUESTION 2: What are the Potential Social and Environmental Risks? *Note: Complete SESP Attachment 1 before responding to Question 2.*	**QUESTION 3: What is the level of significance of the potential social and environmental risks?** *Note: Respond to Questions 4 and 5below before proceeding to Question 5*			**QUESTION 6: Describe the assessment and management measures for each risk rated Moderate, Substantial or High**
Risk Description (broken down by event, cause, impact)	***Impact and Likelihood (1-5)***	***Significance (Low, Moderate Substantial, High)***	***Comments (optional)***	***Description of assessment and management measures for risks rated as Moderate, Substantial or High***
Risk 1: Local communities, especially farmers and vulnerable people, such as women or marginalized indigenous peoples, may not be adequately involved on integrated land use, landscape restoration, and forest management plans (outputs 2.1 and 2.2) and therefore not fully engaged in and not benefit fully from project activities. Principles: Human Rights Sustainability and Resilience Accountability	I = 4 L = 4	**Substantial**	While stakeholder participation and engagement in projects are usually well managed in Benin, there is still a tendency to engage in a top-down approach. Therefore, prudency in the project implementation is needed to further lower this risk. Identification of project locations must ensure meaningful participation of stakeholders, avoiding exclusions of marginalized people. The project needs to ensure that decision making processes are well structured, involving	Screening: To assess and manage all the identified risks, when project locations and activities are finalized, they will be screened on **a site and activity specific basis using the SESP**. Based on the impacts identified, appropriate impact management measures will be integrated in the ESMP, that will be prepared by the first project year. This SESP will be revised as part of regular project monitoring and based on further assessments and on information/details gathered during project implementation. Revisions of the SESP will inform the ESIA and ESMP over the course of the project. Assessment: As the project is Substantial risk with potential downstream and upstream impacts, an **ESIA** is required at field-level activities and a **SESA** is required for the policy-level activities. The ESIA and SESA will take place during the first project

(Questions P.2, P.3, P.4, P.5, P.6, P.13, P14) Gender Equality and Women's Empowerment (Questions P.8, P.9, P.10, P.11) Project level Standards : 6.Indigenous Peoples (Questions 6.1, 6.2, 6.3, 6.4) Standard 6 too (added)			representative of all the different ethnic groups present in project areas.	year. No activities which might have adverse impacts on the rights, lands, resources and territories of marginalized Indigenous Peoples will commence until the ESIA/SESA is completed, impact management measures established, and broad community consent has been obtained. The SESA will be developed to ensure the impacts of upstream activities, included in project Component 1, are assessed and mitigation measures are identified in the Action Matrix. The **ESMF** will inform **further Stakeholder Engagement**, establish the ToR for ESIA/SESA, and strategies and plans to ensure the involvement of all project affected ethnic groups. Further assessments of the roles of individuals and groups, with a focus on women, farmers and on the participation to decision making process of the different ethnic groups, have been done during the PPG. The potential impacts of the project on rights and interests, lands, territories, resources, and traditional livelihoods have been pre-assessed. Consultations with relevant stakeholder groups have been undertaken by field visits done by national consultants in all the PDAs.The findings have been incorporated into the project design. The **FPIC** has begun during PPG and will continue during project implementation with the aim of achieving initial consent from the specific rights-holders, in line with Standard 6 requirements. FPIC will be applied to all project-affected ethnic groups and communities with respect to project activities and plans, and the principles and key

				concepts of Standard 6 will be fully reflected in the ESMF/ESMP, and the approach to Stakeholder Engagement. **Stakeholder identification and prioritization** will be updated at the project inception phase, ensuring that a consultation process is in place throughout the project's implementation <u>Management</u>: During the PPG, a comprehensive Stakeholder Engagement Plan, Gender Action Plan and a Grievance Redress Mechanism have all been developed and will ensure local communities and vulnerable people such as women are involved in project implementation and can have access to a feedback mechanism ensuring their meaningful participation to project activities. Further **Stakeholder consultation** will be done all along the project: stakeholder consultation will be central to the methodology of the additional targeted studies which will, in all its aspects, pay particular attention to the needs of the poorest sections of society, and mitigation/management strategies will be developed specifically targeted towards the needs and concerns of poor and vulnerable groups. An **Ethnic Groups Plan** needs to be developed for each PDA (by the first project year), considering the presence of several ethnic groups, coming from Benin and from abroad. The Plans will be developed in line with the UNDP requirements of Indigenous Peoples Plan , with a focus on assessing and monitoring the relations between groups, to be able to avoid increasing

				any conflict already existing between the ethnic groups present in the project area. The Plans will ensure that the project will engage all ethnic groups and communities at project sites in the LDN dialogue and provide culturally sensitive training and learning events that consider ancestral practices and natural resource uses (land, forest, water), while promoting sustainable land and forest management mechanisms. Targeted training on human rights, stakeholder engagement and Accountability will be provided to the project team.
Risk 2*:* Access to economic resources and natural resources facilitated through interventions under outputs 2.4 and 3.2 could create or exacerbate conflicts between ethnic groups or could increase the risk of violence between project-affected communities and individuals. Principle: Human rights (Question P.7) Project level Standards : 6.Indigenous Peoples (Questions 6.1, 6.2, 6.3, 6.4, 6.5, 6.6, 6.9) Standard 6 too (added)	I = 4 L = 3	**Substantial**	The communities and groups living in the project areas are involved in different livelihood activities related to access to land and other natural resources. There are sedentary and nomadic communities. Between different communities and groups (from Benin or from neighboring countries) there may already be existing disputes and conflicts that could be exacerbated by the identified outputs. In particular, the selection of location and the selection of beneficiaries of the extension services (with target of 50% women) can lead to exacerbating	<u>Assessment:</u> Stakeholder identification and analysis and Stakeholder engagement plan developed during PPG will be updated and monitored during the implementation phase A SESA will be developed for upstream activities, for each policy targeted by the project. An**ESIA per each PDA** will be prepared by the first project year and will include **conflict analysis and assessment**. The ESIA and the SESA will have a focus on the current anthropological scenario, identifying the nature of the relations between different ethnic groups at all levels (national and local) and the impact the project's outputs can have on these relations. <u>Management:</u> This risk will be managed through an **Ethnic Groups Plan** that will be prepared for each PDA by the first project year and through the implementation of the **Stakeholder Engagement**

			inequality and potential conflicts, if a participatory approach is not granted and if the impacts are not identified at site level. The identification and the assessment of the value chains, the selection of climate resilient and sustainable agricultural and agroforestry practices and the access to the market channels need to be done under a sustainable framework.	**Plan**, integrating the findings of the conflict assessment/ESIA/SESA. **A Grievance Redress mechanism**, that will take into consideration the local grievance mechanism already in place, will be implemented during the project's implementation. Where necessary, inter-ethnic stakeholder consultations will be held to resolve "territorial" disputes relating to resource use. An **ESMP** per each PDA will be prepared by the first project year and will include mitigation measures based on ESIA findings, including the ones identified through the conflict assessment.
Risk 3: New approaches to land management, as planned under output 2.1, could result in changes to current access to resources in each PDA and could potentially lead to economic displacement. Principles: Human Rights (Questions P.5 P.6) Project level Standards: Displacement and Resettlement (Questions 5.2) 6. Indigenous Peoples (Questions 6.6)	I = 4 L = 4	**Substantial**	Focusing on restoration of land and forest ecosystems for improved agricultural productivity, prevention of deforestation, and enhanced climate resilience of vulnerable communities, the project is leading to new approaches to land management. The information and data collected in the field by the national consultants during PPG contributed to identifying approaches in line with the current socio economic scenario in Benin. Despite this, the impacts of new land management approaches need to be	<u>Assessment:</u> As indicated in the ESMF, the three **ESIA and the SESA** will be prepared by the first project year and will include the impacts of the activities included in output 2.1. <u>Management:</u> The risk will be managed through the ESIA/**ESMP**, SESA Action Matrix and **Stakeholder consultations,** in line with the Stakeholder Engagement Plan and the Ethnic Groups Plan, ensuring that livelihoods are not adversely impacted by the project. The impact assessment will identify any economic displacement, and strategies will be included to avoid, minimize or manage any such impacts. Where necessary, a **Livelihood Action Plan** will be produced to ensure that any such impacts are appropriately managed.

			further assessed and mitigated.	
Risk 4: Project activities, such as access to extension services, climate resilient and sustainable agricultural and agroforestry practices implementation and reinforcement of cooperatives and farmer organizations and approaches might not fully incorporate or adequately reflect views of women and girls and ensure equitable opportunities for their involvement and benefits. Principles: Gender Equality and Women's Empowerment (Questions P.8, P.9, P.10, P.11)	I = 3 L = 2	**Moderate**	During the project's development phase, the risks related to the lack of gender equality have been taken into consideration. The stakeholder consultation has been done by national consultants through a gender sensitive approach, considering women as one of the main actors who will ensure the project will reach the identified objectives. During project implementation, attention will be put to ensure gender equality and to involve women into the project interventions. Attention has to be put on the fact that in Benin, gender bias remains prevalent, including in upper-middle and higher-level management. Finally, there is a tendency that men, more often than women, participate in trainings at all levels.	<u>Assessment:</u> A full **Gender Analysis** has been developed to clarify relevant gender concerns and identify how the mainstreaming of gender into the project interventions can be achieved. In this regard during the project development phase specific consultations with relevant women's groups/leaders have been conducted by the project's development team, to better understand the role of women and men in project related sectors, such as land management, access to natural resources, income generating activities and participation to cooperatives and farmer organizations. <u>Management:</u> The **Ethnic Groups Plan** will include the Gender approach, considering the differences among ethnic groups. The consultation of women and girls will be ensured during project implementation, especially in planning, monitoring and reporting processes. Informed by the Gender Analysis, the **Gender Action Plan**, has been developed to actively promote the role of women and girls in the project and will be updated by the first six months of the project. The comprehensive **Stakeholder Engagement Plan** will also include women's engagement in project related activities.

Risk 5: The operationalization of the Integrated land use, landscape restoration, and forest management (outputs 2.1 and 2.2) may have negative impacts on habitats, ecosystems, and/or livelihoods. Project level Standards: 1. Biodiversity Conservation and Sustainable Natural Resource Management (Questions 1.1, 1.2, 1.3, 1.6, 1.7, 1.8, 1.9, 1.10) 3. Community Health, Safety and Security (Question 3.6, 3.8)	I = 4 L = 2	**Moderate**	If the risk materialized, further degradation of the agroecosystem could occur leading to further loss of ecosystem services, increased environmental impact and loss of land productivity. The latter resulting in reduced income for land users. However, the project's SLM and resilient agriculture interventions will build on existing national initiatives to strengthen the Green Belt in northern Benin and support SLM and support sustainable agriculture and food security. Successful models are to be scaled-up and act as demonstrations for other non-project sites. The projects demonstration sites will also act as training sites for practitioners and policy makers. Thus, the possibility for this risk to materialize is limited. Further, agriculture development in the target PDAs must take into consideration the existing management regimes for the neighboring Protected	<u>Assessment:</u> During the project development phase focus has been placed on scoping appropriate SLM and climate resilient agriculture models and techniques that are included in the project activities. This will be followed up during implementation by further screening of models and techniques to ensure optimal suitability for the project localities. The project design ensure that the project developed solutions (including regulations, plans, trainings guidelines etc.) can be effectively included into the local planning processes as well as upscaled to other Agricultural Development Areas across Benin while ensuring that the management regimes of neighboring Protected Areas are respected. This risk will be assessed in the three **ESIA and in the SESA**, as indicated in the ESMF <u>Management</u>: During the PPG a subset of suitable models and techniques has been identified for SLM and climate-smart agriculture which will be used during project implementation. During the PPG, the alignment of agricultural development activities with management regimes of neighboring Pas has been ensured. The ESIA findings will be included in the **ESMP that will be developed for each PDA.**

			Areas (PAs) of W and Pendjari as well as classified and community protected forest reserves. These PAs are already under considerable pressure from increasing human populations in the surrounding communities where farmers, hunters and cattle herders do not respect the boundaries of the Controlled Occupational Zones. Balancing the needs of local communities to strengthen climate resilience while reducing degradation and safeguarding the biodiversity conservation efforts within the parks and buffer zones will be a necessary and challenging undertaking for the project.	
Risk 6: Land and forest restoration (Output 2.2) and selected climate resilient and sustainable agricultural and agroforestry practices and market channels strengthening (output 3.2) could increase the vulnerabilities of populations to the effects of climate change.	I = 3 L = 3	**Moderate**	The project is climate dependent and changes in climate could have an impact on project's outputs and on vulnerability of communities. The project areas will be sensitive to increased droughts and deterioration of habitat as a result of climate change. However, planned project	<u>Assessment and Management:</u> Project's implementation will fully integrate climate change mitigation and adaptation measures including through land restoration methodologies, livelihoods support, capacity building and awareness. Demonstrations on SLM and climate-resilient agricultural practices can be a key tool in addressing climate change. Despite these measures, there may be a residual risk that needs to be assessed and managed. Therefore, this risk will be further assessed and

Project level Standards: 2. Climate Change Mitigation and Disaster risks (Questions 2.1, 2.2, 2.3)			activities will contribute towards increased resilience to climate change effects in the area. The restoration of agricultural lands and habitats aims to reduce impacts and vulnerability of communities. For instance, the use of local species adapted to the current local climate conditions will result in increased resilience to local climate variations. The vulnerability of communities will be monitored and reported at national level, and these processes must ensure the consultation with local communities, to include their feedback.	managed through **ESIA**, and through the **ESMP**, especially focusing on **monitoring and reporting climate change vulnerability system strengthening**.
Risk 7: Poorly designed or executed project activities could damage critical or sensitive habitats, including through the introduction of invasive alien species during land and forest restoration. Project level Standards: 1. Biodiversity Conservation and Sustainable Natural Resource Management	I = 3 L = 3	**Moderate**	As agricultural lands are one of the main pathways for the spread of alien invasive species, the project's engagement in cropland management and restoration of degraded forest lands and riparian areas creates the potential for inadvertently introducing IAS. This could happen either through IAS stowaway in seedlings or seeds or by being carried	<u>Assessment and Management</u>: Under outputs 2.1 and 2.2, land and forest restoration will be carried out in accordance with management plans developed using participatory planning processes and informed by **ESIA.** The project will ensure that only native species are used for reforestation and biodiversity conservation activities proposed in the project. This risk has been managed through the design of the project and will be further examined in the course of the ESIA, based on the ESMF, and included in the **ESMP** as determined necessary.

(Questions 1.6)			into the project areas by farmers or workers engaged in the restoration work or tending to their farmland, as many IAS can stick to clothing or be embedded in mud under boots, etc.	
Risk 8: Selected climate resilient and sustainable agricultural and agroforestry practices poorly designed or executed (output 3.1 and 3.2) could negatively affect human health by the inappropriate use of pesticides and herbicides. Project level Standards: 7. Labour and working conditions (Question 7.6) 8. Pollution Prevention and Resource Efficiency(Question 8.1, 8.5)	I = 3 L = 2	**Moderate**	As pesticides and herbicides may be used in connection with the project's demonstration work, there is a concern that this usage will have negative health effects. In this regard, the activities that will be identified for output 3.1 and 3.2 will ensure that: 1) no internationally or nationally banned herbicides or pesticides will be used 2) workers working with said products will be trained and are equipped with protective equipment where/if appropriate 3) follow national, provincial and local guidelines for handling and management use of chemicals and chemical containers.	Assessment: The use of pesticides and herbicides in project target areas are to be reviewed, as in chemical management and handling to ensure the project design adequately addresses this risk. Only environmentally friendly pesticides and herbicides meeting internationally accepted standards will be used by the project. Their storage and application will be subject to the health and safety guidance and protocols developed to address Risk 8. The project will also focus on organic practices wherever feasible. As specific locations and activities are proposed they will be subject to **targeted studies** to ensure there are no public health risks resulting from chemical use, if any, or hazardous waste. The targeted studies will include assessment of the risk that the project will lead to an increase of exposure to hazards, and appropriate safeguard procedures will be employed. ESMF will include this risk in the **ESIA** ToR, that will address use of pesticides and herbicides related risks. Management: Site-specific **Pesticide and Herbicides Management Plans** will be developed for all

				relevant activities. The plans will be developed in accordance with good international practice, and will avoid supporting the manufacture, trade, and use of chemicals and hazardous materials subject to international bans, restrictions or phase-outs due to their high toxicity to living organisms, environmental persistence, or potential for bioaccumulation, unless for acceptable purposes as defined by the conventions or protocols. Based on the findings of ESIA, specific mitigation measures for this risk will be integrated into the **ESMP.**
Risk 9: Natural features with cultural significance, such as sacred forests, could be negatively impacted by outputs 2.2, 2.4, 3.1 and 3.2 . Project level Standards: 1. Biodiversity Conservation and Sustainable Natural Resource Management (Question 1.2) 4. Cultural Heritage (Questions 4.1, 4.3,4.4, 4.5) 5.Displacement and Resettlement (Questions 5.4) 6. Indigenous Peoples (Questions 6.2, 6.3, 6.4, 6.5, 6.9)	I = 3 L = 3	**Moderate**	During the baseline analysis and the field visits for PPG, the presence of sacred forests in the project areas has been identified as areas that could be impacted by project activities. Some of the new identified income generating activities and the land and forest restoration can involve areas where sacred sites are presents. Sacred sites or natural resources with sacred value (such as specific trees) are often presents in many areas in Benin. Project's activities must be managed considering such type of issue that are sensitive for the local population.	<u>Assessment:</u> The **ESIA** will assess whether natural features with cultural significance will be impacted by the project, as locations are defined. Where they are found to be project-affected, FPIC consultations will be carried out with the objective of achieving initial consent from specific rights-holders, in line with Standard 6 requirements. Further **FPIC** consultations will be ongoing and followed during project implementation, following the measures summarized in the ESMF, in the Ethnic Groups Planning Framework (as IPPF) and in the Ethnic Groups Plan that will be prepared as part of the subsequent ESMP as required by ESIA assessment reports. ESIA and SESA will include a focus on natural features with cultural significance identification and analysis, with a strong participatory approach, to collect information from local communities about the meaning of the natural features,

				A **community mapping** will be included in the ESIA to ensure the communities' perception of the landscape and of the natural resources is taken into consideration and will inform the ESMP. <u>Management</u> The **Stakeholder Engagement Plan** - in which inputs from the **Ethnic Groups Plan** will be included - will include consultations with stakeholders involved in cultural heritage management, i.e. people in charge of conservation and management of sacred forest. The management of this risk will be included into the **ESMP,** based on ESIA findings, and in the Action Matrix, included in the SESA reports.
Risk 10: Field and policy level activities related to the agricultural value chains selected and assessed (outputs 3.1 and 3.2) could inadvertently support child labour, forced labour, and other violations of international labour standards. Principles: Human Rights	I = 4 L = 3	**Moderate**	Agricultural and agroforestry practices and strengthened cooperatives and farmer organizations and negotiated partnerships with traders and processors can lead to the involvement of girl children in economic activities. Involvement of girls in economic activities will impact on their wellbeing and on the enjoyment of their right. In Benin the girls involved in labour are called "*vidomegon*". This practice	<u>Assessment and Management:</u> The **SESA and ESIA** will include a review of labour standards in each PDAs where the activities will be implemented, and propose safeguards including monitoring arrangements which will be integrated into the **ESMP** The SESA – and the related reports and Action Matrix - will also include study on how sustainable land and forest restoration might affect labour requirements, potentially increasing pressure to employ children, or use their labour on smallholdings.

(Questions P.2, P.3, P.4, P.5, P.6) Gender Equality and Women's Empowerment (Questions P.8, P.9, P.10, P.11) Project level standards: 7. Labour and Working Conditions (question 7.1, 7.3, 7.6)			is related to the family structure, where boys and especially girls are entrusted to relatives when the parents cannot take care of their daughters and sons or when there is a need of an income in the family.	
Risk 11: Informal farmers, or those without registered legal entitlement to the land they farm, may be excluded from project benefits. Principles: Human Rights (Question P.2, P.3, P.4, P.6)	I = 3 L = 3	**Moderate**	Informal land tenure arrangements and/or a failure to update official land use records may result in the exclusion of non-registered farmers from project benefits, especially benefits under Component 3. This may apply particularly to marginalized/vulnerable groups, including migrants.	<u>Assessment and Management:</u> The **ESIA** will identify the extent of this risk, and the level of impact it can have on the achievement of results. The findings will be incorporated in the **ESMP**, to ensure that lack of legal entitlement to land is not a barrier that restrict access to project benefits to only those with formalized land use rights. The risk will be managed also through the **Stakeholder Engagement Plan** and the **Ethnic Groups Plan**, where the attention will be focused on the most marginalized or at risk of marginalization groups.
	QUESTION 4: What is the overall project risk categorization?			
	Low Risk	☐		
	Moderate Risk	☐		
	Substantial Risk	**X**	Overall, the risk rating for this project is Substantial (A total of 11 risks have been	

			identified: 8 risks are rated as *Moderate,* and 3 risks are rated as *Substantial)*. To meet the SES requirements the following have been prepared: (1) Environmental and Social Management Framework (ESMF); (2) Stakeholder Engagement Plan; (3) Gender Analysis and Gender Action Plan; (4) Grievance Redress Mechanism. To mitigate the identified risks an ESIA for each PDA is required for the field-level activities and a SESA is required for each policy targeted, as assessment of policy level activities. Both assessments will be developed within the first project year. The ESIA will inform the development of the required ESMP, one for each PDA, to be developed within the first project year. Considering the risks related to Standard 6, an Ethnic Groups Plan will be developed for each PDA within the first project year. To manage specific risks related to habitats and human health, site-specific Pesticides and Herbicides Management Plans will be developed within the first project year. An effective, transparent, free-to-access project-level grievance mechanism will be put in place to ensure that all issues and concerns will be reported, discussed and addressed.
	High Risk	☐	
	QUESTION 5: Based on the identified risks and risk categorization, what requirements of the SES are triggered? (check all that apply)		
	Question only required for Moderate, Substantial and High Risk projects		

	Is assessment required? (check if "yes")	**X**			***Status? (completed, planned)***
	if yes, indicate overall type and status		**X**	Targeted assessment(s): Gender Analysis	Completed
			X	ESIA (Environmental and Social Impact Assessment)	Planned
			X	SESA (Strategic Environmental and Social Assessment)	Planned
	Are management plans required? (check if "yes)	**X**			
	If yes, indicate overall type		**X**	Targeted management plans: Stakeholder Engagement Plan Gender Action Plan Ethnic Groups Plan (IPP format) Pesticide and Herbicides Management Plans	 Completed Completed Planned Planned
			X	ESMP (Environmental and Social Management Plan)	Planned
			X	ESMF (Environmental and Social Management Framework)	Completed (with IPPF)
	Based on identified risks, which Principles/Project-level Standards triggered?		**Comments (not required)**		
	Overarching Principle: Leave No One Behind				
	Human Rights	**X**	.		
	Gender Equality and Women's Empowerment	**X**			
	Accountability	**X**			
	1. Biodiversity Conservation and Sustainable Natural Resource Management	**X**			
	2. Climate Change and Disaster Risks	**X**			
	3. Community Health, Safety and Security	**X**			

	4. Cultural Heritage	**X**	
	5. Displacement and Resettlement	**X**	
	6. Indigenous Peoples	**X**	
	7. Labour and Working Conditions	**X**	
	8. Pollution Prevention and Resource Efficiency	**X**	

Final Sign Off

Final Screening at the design-stage is not complete until the following signatures are included

Signature	***Date***	***Description***
QA Assessor		UNDP staff member responsible for the project, typically a UNDP Programme Officer. Final signature confirms they have "checked" to ensure that the SESP is adequately conducted.
QA Approver		UNDP senior manager, typically the UNDP Deputy Country Director (DCD), Country Director (CD), Deputy Resident Representative (DRR), or Resident Representative (RR). The QA Approver cannot also be the QA Assessor. Final signature confirms they have "cleared" the SESP prior to submittal to the PAC.
PAC Chair		UNDP chair of the PAC. In some cases PAC Chair may also be the QA Approver. Final signature confirms that the SESP was considered as part of the project appraisal and considered in recommendations of the PAC.

SESP Attachment 1. Social and Environmental Risk Screening Checklist

Checklist Potential Social and Environmental Risks	
INSTRUCTIONS: The risk screening checklist will assist in answering Questions 2-6 of the Screening Template. Answers to the checklist questions help to (1) identify potential risks, (2) determine the overall risk categorization of the project, and (3) determine required level of assessment and management measures. Refer to the SES toolkit for further guidance on addressing screening questions.	
Overarching Principle: Leave No One Behind **Human Rights**	**Answer (Yes/No)**
P.1 Have local communities or individuals raised human rights concerns regarding the project (e.g. during the stakeholder engagement process, grievance processes, public statements)?	*NO*
P.2 Is there a risk that duty-bearers (e.g. government agencies) do not have the capacity to meet their obligations in the project?	*YES*
P.3 Is there a risk that rights-holders (e.g. project-affected persons) do not have the capacity to claim their rights?	*YES*
Would the project potentially involve or lead to:	
P.4 adverse impacts on enjoyment of the human rights (civil, political, economic, social or cultural) of the affected population and particularly of marginalized groups?	YES
P.5 inequitable or discriminatory impacts on affected populations, particularly people living in poverty or marginalized or excluded individuals or groups, including persons with disabilities?[96]	YES
P.6 restrictions in availability, quality of and/or access to resources or basic services, in particular to marginalized individuals or groups, including persons with disabilities?	YES
P.7 exacerbation of conflicts among and/or the risk of violence to project-affected communities and individuals?	YES

[96] Prohibited grounds of discrimination include race, ethnicity, sex, age, language, disability, sexual orientation, gender identity, religion, political or other opinion, national or social or geographical origin, property, birth or other status including as an indigenous person or as a member of a minority. References to "women and men" or similar is understood to include women and men, boys and girls, and other groups discriminated against based on their gender identities, such as transgender and transsexual people.

Gender Equality and Women's Empowerment		
P.8	Have women's groups/leaders raised gender equality concerns regarding the project, (e.g. during the stakeholder engagement process, grievance processes, public statements)?	YES
Would the project potentially involve or lead to:		
P.9	adverse impacts on gender equality and/or the situation of women and girls?	*YES*
P.10	reproducing discriminations against women based on gender, especially regarding participation in design and implementation or access to opportunities and benefits?	YES
P.11	limitations on women's ability to use, develop and protect natural resources, taking into account different roles and positions of women and men in accessing environmental goods and services? *For example, activities that could lead to natural resources degradation or depletion in communities who depend on these resources for their livelihoods and well being*	YES
P.12	exacerbation of risks of gender-based violence? *For example, through the influx of workers to a community, changes in community and household power dynamics, increased exposure to unsafe public places and/or transport, etc*.	NO
Sustainability and Resilience: Screening questions regarding risks associated with sustainability and resilience are encompassed by the Standard-specific questions below		
Accountability		
Would the project potentially involve or lead to:		
P.13	exclusion of any potentially affected stakeholders, in particular marginalized groups and excluded individuals (including persons with disabilities), from fully participating in decisions that may affect them?	YES
P.14	grievances or objections from potentially affected stakeholders?	YES
P.15	risks of retaliation or reprisals against stakeholders who express concerns or grievances, or who seek to participate in or to obtain information on the project?	NO
Project-Level Standards		

Standard 1: Biodiversity Conservation and Sustainable Natural Resource Management		
Would the project potentially involve or lead to:		
1.1	adverse impacts to habitats (e.g. modified, natural, and critical habitats) and/or ecosystems and ecosystem services? *For example, through habitat loss, conversion or degradation, fragmentation, hydrological changes*	YES
1.2	activities within or adjacent to critical habitats and/or environmentally sensitive areas, including (but not limited to) legally protected areas (e.g. nature reserve, national park), areas proposed for protection, or recognized as such by authoritative sources and/or indigenous peoples or local communities?	YES
1.3	changes to the use of lands and resources that may have adverse impacts on habitats, ecosystems, and/or livelihoods? (Note: if restrictions and/or limitations of access to lands would apply, refer to Standard 5)	YES
1.4	risks to endangered species (e.g. reduction, encroachment on habitat)?	NO
1.5	exacerbation of illegal wildlife trade?	NO
1.6	introduction of invasive alien species?	YES
1.7	adverse impacts on soils?	YES
1.8	harvesting of natural forests, plantation development, or reforestation?	YES
1.9	significant agricultural production?	YES
1.10	animal husbandry or harvesting of fish populations or other aquatic species?	YES
1.11	significant extraction, diversion or containment of surface or ground water? *For example, construction of dams, reservoirs, river basin developments, groundwater extraction*	NO
1.12	handling or utilization of genetically modified organisms/living modified organisms?[97]	NO

[97] See the Convention on Biological Diversity and its Cartagena Protocol on Biosafety.

1.13	utilization of genetic resources? (e.g. collection and/or harvesting, commercial development)[98]	NO
1.14	adverse transboundary or global environmental concerns?	NO
Standard 2: Climate Change and Disaster Risks		
Would the project potentially involve or lead to:		
2.1	areas subject to hazards such as earthquakes, floods, landslides, severe winds, storm surges, tsunami or volcanic eruptions?	YES
2.2	outputs and outcomes sensitive or vulnerable to potential impacts of climate change or disasters? *For example, through increased precipitation, drought, temperature, salinity, extreme events, earthquakes*	YES
2.3	increases in vulnerability to climate change impacts or disaster risks now or in the future (also known as maladaptive or negative coping practices)? *For example, changes to land use planning may encourage further development of floodplains, potentially increasing the population's vulnerability to climate change, specifically flooding*	YES
2.4	increases of greenhouse gas emissions, black carbon emissions or other drivers of climate change?	NO
Standard 3: Community Health, Safety and Security		
Would the project potentially involve or lead to:		
3.1	construction and/or infrastructure development (e.g. roads, buildings, dams)? (Note: the GEF does not finance projects that would involve the construction or rehabilitation of large or complex dams)	NO
3.2	air pollution, noise, vibration, traffic, injuries, physical hazards, poor surface water quality due to runoff, erosion, sanitation?	NO
3.3	harm or losses due to failure of structural elements of the project (e.g. collapse of buildings or infrastructure)?	NO

[98] See the Convention on Biological Diversity and its Nagoya Protocol on access and benefit sharing from use of genetic resources.

3.4	risks of water-borne or other vector-borne diseases (e.g. temporary breeding habitats), communicable and noncommunicable diseases, nutritional disorders, mental health?	NO
3.5	transport, storage, and use and/or disposal of hazardous or dangerous materials (e.g. explosives, fuel and other chemicals during construction and operation)?	NO
3.6	adverse impacts on ecosystems and ecosystem services relevant to communities' health (e.g. food, surface water purification, natural buffers from flooding)?	YES
3.7	influx of project workers to project areas?	NO
3.8	engagement of security personnel to protect facilities and property or to support project activities?	YES
Standard 4: Cultural Heritage		
Would the project potentially involve or lead to:		
4.1	activities adjacent to or within a Cultural Heritage site?	YES
4.2	significant excavations, demolitions, movement of earth, flooding or other environmental changes?	NO
4.3	adverse impacts to sites, structures, or objects with historical, cultural, artistic, traditional or religious values or intangible forms of culture (e.g. knowledge, innovations, practices)? (Note: projects intended to protect and conserve Cultural Heritage may also have inadvertent adverse impacts)	YES
4.4	alterations to landscapes and natural features with cultural significance?	YES
4.5	utilization of tangible and/or intangible forms (e.g. practices, traditional knowledge) of Cultural Heritage for commercial or other purposes?	YES
Standard 5: Displacement and Resettlement		
Would the project potentially involve or lead to:		
5.1	temporary or permanent and full or partial physical displacement (including people without legally recognizable claims to land)?	NO
5.2	economic displacement (e.g. loss of assets or access to resources due to land acquisition or access restrictions – even in the absence of physical relocation)?	YES

5.3	risk of forced evictions?[99]	NO
5.4	impacts on or changes to land tenure arrangements and/or community-based property rights/customary rights to land, territories and/or resources?	YES
Standard 6: Indigenous Peoples		
Would the project potentially involve or lead to:		
6.1	areas where indigenous peoples are present (including project area of influence)?	YES
6.2	activities located on lands and territories claimed by indigenous peoples?	YES
6.3	impacts (positive or negative) to the human rights, lands, natural resources, territories, and traditional livelihoods of indigenous peoples (regardless of whether indigenous peoples possess the legal titles to such areas, whether the project is located within or outside of the lands and territories inhabited by the affected peoples, or whether the indigenous peoples are recognized as indigenous peoples by the country in question)? *If the answer to screening question 6.3 is "yes", then the potential risk impacts are considered significant and the project would be categorized as either Substantial Risk or High Risk*	YES
6.4	the absence of culturally appropriate consultations carried out with the objective of achieving FPIC on matters that may affect the rights and interests, lands, resources, territories and traditional livelihoods of the indigenous peoples concerned?	YES
6.5	the utilization and/or commercial development of natural resources on lands and territories claimed by indigenous peoples?	YES
6.6	forced eviction or the whole or partial physical or economic displacement of indigenous peoples, including through access restrictions to lands, territories, and resources? *Consider, and where appropriate ensure, consistency with the answers under Standard 5 above*	YES
6.7	adverse impacts on the development priorities of indigenous peoples as defined by them?	NO

[99] Forced eviction is defined here as the permanent or temporary removal against their will of individuals, families or communities from the homes and/or land which they occupy, without the provision of, and access to, appropriate forms of legal or other protection. Forced evictions constitute gross violations of a range of internationally recognized human rights.

6.8	risks to the physical and cultural survival of indigenous peoples?	NO
6.9	impacts on the Cultural Heritage of indigenous peoples, including through the commercialization or use of their traditional knowledge and practices? *Consider, and where appropriate ensure, consistency with the answers under Standard 4 above.*	YES
Standard 7: Labour and Working Conditions		
Would the project potentially involve or lead to: (note: applies to project and contractor workers)		YES
7.1	working conditions that do not meet national labour laws and international commitments?	NO
7.2	working conditions that may deny freedom of association and collective bargaining?	NO
7.3	use of child labour?	YES
7.4	use of forced labour?	NO
7.5	discriminatory working conditions and/or lack of equal opportunity?	NO
7.6	occupational health and safety risks due to physical, chemical, biological and psychosocial hazards (including violence and harassment) throughout the project life-cycle?	YES
Standard 8: Pollution Prevention and Resource Efficiency		
Would the project potentially involve or lead to:		
8.1	the release of pollutants to the environment due to routine or non-routine circumstances with the potential for adverse local, regional, and/or transboundary impacts?	YES
8.2	the generation of waste (both hazardous and non-hazardous)?	NO
8.3	the manufacture, trade, release, and/or use of hazardous materials and/or chemicals?	NO
8.4	the use of chemicals or materials subject to international bans or phase-outs?	NO

	For example, DDT, PCBs and other chemicals listed in international conventions such as the Montreal Protocol, Minamata Convention, Basel Convention, Rotterdam Convention, Stockholm Convention	
8.5	the application of pesticides that may have a negative effect on the environment or human health?	YES
8.6	significant consumption of raw materials, energy, and/or water?	NO

Annex 6: UNDP Atlas Risk Register

#	Description	Risk category	Impact and Probability (1-5)	Risk treatment / management measures	Risk owner
From SESP					
1	Local communities, especially farmers and vulnerable people, such as women or marginalized indigenous peoples, may not be adequately involved on integrated land use, landscape restoration, and forest management plans (outputs 2.1 and 2.2) and therefore not fully engaged in and not benefit fully from project activities.	Social and environ-mental	I = 4 L = 4 Sub-stantial	Screening: To assess and manage all the identified risks, when project locations and activities are finalized, they will be screened on **a site and activity specific basis using the SESP**. Based on the impacts identified, appropriate impact management measures will be integrated in the ESMP, that will be prepared by the first project year. This SESP will be revised as part of regular project monitoring and based on further assessments and on information/details gathered during project implementation. Revisions of the SESP will inform the ESIA and ESMP over the course of the project. Assessment: As the project is Substantial risk with potential downstream and upstream impacts, an **ESIA** is required at field-level activities and a **SESA** is required for the policy-level activities. The ESIA and SESA will take place during the first project year. No activities which might have adverse impacts on the rights, lands, resources and territories of marginalized Indigenous Peoples will commence until the ESIA/SESA is completed, impact management measures established, and broad community consent has been obtained. The SESA will be developed to ensure the impacts of upstream activities, included in project Component 1, are assessed and mitigation measures are identified in the Action Matrix. The **ESMF** will inform **further Stakeholder Engagement**, establish the ToR for ESIA/SESA, and strategies and plans to ensure the involvement of all project affected ethnic groups. Further assessments of the roles of individuals and groups, with a focus on women, farmers and on the participation to decision making process of the different ethnic groups, have been done during the PPG. The potential impacts of the project on rights and interests, lands, territories, resources, and traditional livelihoods have been pre-assessed. Consultations with relevant stakeholder groups have been undertaken by field visits done by national consultants in all the PDAs. The findings have been incorporated into the project design. The **FPIC** has begun during PPG and will continue during project implementation with the aim of achieving initial consent from the specific rights-holders, in line with Standard 6 requirements. FPIC will be applied to all project-affected ethnic groups and communities with respect to project activities and plans, and the principles and key concepts of Standard 6 will be fully reflected in the ESMF/ESMP, and the approach to Stakeholder Engagement. **Stakeholder identification and prioritization** will be updated at the project inception phase, ensuring that a consultation process is in place throughout the project's implementation	DGEC under MCV DD

#	Description	Risk category	Impact and Probability (1-5)	Risk treatment / management measures	Risk owner
				Management: During the PPG, a comprehensive Stakeholder Engagement Plan, Gender Action Plan and a Grievance Redress Mechanism have all been developed and will ensure local communities and vulnerable people such as women are involved in project implementation and can have access to a feedback mechanism ensuring their meaningful participation to project activities.Further **Stakeholder consultation** will be done all along the project: stakeholder consultation will be central to the methodology of the additional targeted studies which will, in all its aspects, pay particular attention to the needs of the poorest sections of society, and mitigation/management strategies will be developed specifically targeted towards the needs and concerns of poor and vulnerable groups. An **Ethnic Groups Plan** needs to be developed for each PDA (by the first project year), considering the presence of several ethnic groups, coming from Benin and from abroad. The Plans will be developed in line with the UNDP requirements of Indigenous Peoples Plan, with a focus on assessing and monitoring the relations between groups, to be able to avoid increasing any conflict already existing between the ethnic groups present in the project area. The Plans will ensure that the project will engage all ethnic groups and communities at project sites in the LDN dialogue and provide culturally sensitive training and learning events that consider ancestral practices and natural resource uses (land, forest, water), while promoting sustainable land and forest management mechanisms. Targeted training on human rights, stakeholder engagement and Accountability will be provided to the project team.	
2	Access to economic resources and natural resources facilitated through interventions under outputs 2.4 and 3.2 could create or exacerbate conflicts between ethnic groups or could increase the risk of violence between project-affected communities and individuals.	Social and environ-mental	I = 4 L = 3 Substantial	Assessment: Stakeholder identification and analysis and Stakeholder engagement plan developed during PPG will be updated and monitored during the implementation phase A SESA will be developed for upstream activities, for each policy targeted by the project. An**ESIA per each PDA** will be prepared by the first project year and will include **conflict analysis and assessment**. The ESIA and the SESA will have a focus on the current anthropological scenario, identifying the nature of the relations between different ethnic groups at all levels (national and local) and the impact the project's outputs can have on these relations. Management: This risk will be managed through an **Ethnic Groups Plan** that will be prepared for each PDA by the first project year and through the implementation of the **Stakeholder Engagement Plan**, integrating the findings of the conflict assessment/ESIA/SESA. **A Grievance Redress mechanism**, that will take into consideration the local grievance mechanism already in place, will be implemented during the project's implementation. Where necessary, inter-ethnic stakeholder consultations will be held to resolve "territorial" disputes relating to resource use. An **ESMP** per each PDA will be prepared by the first project year and will include mitigation measures based on ESIA findings, including the ones identified through the conflict assessment	DGEC under MCV DD

#	Description	Risk category	Impact and Probability (1-5)	Risk treatment / management measures	Risk owner
3	New approaches to land management, as planned under output 2.1, could result in changes to current access to resources in each PDA and could potentially lead to economic displacement.	Social and environ-mental	I = 4 L = 4 Substantial	Assessment: As indicated in the ESMF, the three **ESIA and the SESA** will be prepared by the first project year and will include the impacts of the activities included in output 2.1. Management: The risk will be managed through the ESIA/**ESMP**, SESA Action Matrix and **Stakeholder consultations,** in line with the Stakeholder Engagement Plan and the Ethnic Groups Plan, ensuring that livelihoods are not adversely impacted by the project. The impact assessment will identify any economic displacement, and strategies will be included to avoid, minimize or manage any such impacts. Where necessary, a **Livelihood Action Plan** will be produced to ensure that any such impacts are appropriately managed	DGEC under MCV DD
4	Project activities, such as access to extension services, climate resilient and sustainable agricultural and agroforestry practices implementation and reinforcement of cooperatives and farmer organizations and approaches might not fully incorporate or adequately reflect views of women and girls and ensure equitable opportunities for their involvement and benefits.	Social and environ-mental	I = 3 L = 2 Moderate	Assessment: A full **Gender Analysis** has been developed to clarify relevant gender concerns and identify how the mainstreaming of gender into the project interventions can be achieved. In this regard during the project development phase specific consultations with relevant women's groups/leaders have been conducted by the project's development team, to better understand the role of women and men in project related sectors, such as land management, access to natural resources, income generating activities and participation to cooperatives and farmer organizations. Management: The **Ethnic Groups Plan** will include the Gender approach, considering the differences among ethnic groups. The consultation of women and girls will be ensured during project implementation, especially in planning, monitoring and reporting processes. Informed by the Gender Analysis, the **Gender Action Plan**, has been developed to actively promote the role of women and girls in the project and will be updated by the first six months of the project. The comprehensive **Stakeholder Engagement Plan** will also include women's engagement in project related activities.	DGEC under MCV DD

#	Description	Risk category	Impact and Probability (1-5)	Risk treatment / management measures	Risk owner
5	The operationalization of the Integrated land use, landscape restoration, and forest management (outputs 2.1 and 2.2) may have negative impacts on habitats, ecosystems, and/or livelihoods.	Social and environ-mental	I = 4 L = 2 Moderate	Assessment: During the project development phase focus has been placed on scoping appropriate SLM and climate resilient agriculture models and techniques that are included in the project activities. This will be followed up during implementation by further screening of models and techniques to ensure optimal suitability for the project localities. The project design ensure that the project developed solutions (including regulations, plans, trainings guidelines etc.) can be effectively included into the local planning processes as well as upscaled to other Agricultural Development Areas across Benin while ensuring that the management regimes of neighboring Protected Areas are respected. This risk will be assessed in the three **ESIA and in the SESA**, as indicated in the ESMF Management: During the PPG a subset of suitable models and techniques has been identified for SLM and climate-smart agriculture which will be used during project implementation. During the PPG, the alignment of agricultural development activities with management regimes of neighboring Pas has been ensured. The ESIA findings will be included in the **ESMP that will be developed for each PDA.**	DGEC under MCV DD
6	Land and forest restoration (Output 2.2) and selected climate resilient and sustainable agricultural and agroforestry practices and market channels strengthening (output 3.2) could increase the vulnerabilities of populations to the effects of climate change.	Social and environ-mental	I = 3 L = 3 Moderate	Assessment and Management: Project's implementation will fully integrate climate change mitigation and adaptation measures including through land restoration methodologies, livelihoods support, capacity building and awareness. Demonstrations on SLM and climate-resilient agricultural practices can be a key tool in addressing climate change. Despite these measures, there may be a residual risk that needs to be assessed and managed. Therefore, this risk will be further assessed and managed through **ESIA**, and through the **ESMP**, especially focusing on **monitoring and reporting climate change vulnerability system strengthening.**	DGEC under MCV DD

#	Description	Risk category	Impact and Probability (1-5)	Risk treatment / management measures	Risk owner
7	Poorly designed or executed project activities could damage critical or sensitive habitats, including through the introduction of invasive alien species during land and forest restoration.	Social and environ-mental	I = 3 L = 3 Moderate	Assessment and Management: Under outputs 2.1 and 2.2, land and forest restoration will be carried out in accordance with management plans developed using participatory planning processes and informed by **ESIA.** The project will ensure that only native species are used for reforestation and biodiversity conservation activities proposed in the project. This risk has been managed through the design of the project and will be further examined in the course of the ESIA, based on the ESMF, and included in the **ESMP** as determined necessary.	DGEC under MCV DD
8	Selected climate resilient and sustainable agricultural and agroforestry practices poorly designed or executed (output 3.1 and 3.2) could negatively affect human health by the inappropriate use of pesticides and herbicides.	Social and environ-mental	I = 3 L = 2 Moderate	Assessment: The use of pesticides and herbicides in project target areas are to be reviewed, as in chemical management and handling to ensure the project design adequately addresses this risk. Only environmentally friendly pesticides and herbicides meeting internationally accepted standards will be used by the project. Their storage and application will be subject to the health and safety guidance and protocols developed to address Risk 8. The project will also focus on organic practices wherever feasible. As specific locations and activities are proposed they will be subject to **targeted studies** to ensure there are no public health risks resulting from chemical use, if any, or hazardous waste. The targeted studies will include assessment of the risk that the project will lead to an increase of exposure to hazards, and appropriate safeguard procedures will be employed. ESMF will include this risk in the **ESIA** ToR, that will address use of pesticides and herbicides related risks. Management: Site-specific **Pesticide and Herbicides Management Plans** will be developed for all relevant activities. The plans will be developed in accordance with good international practice, and will avoid supporting the manufacture, trade, and use of chemicals and hazardous materials subject to international bans, restrictions or phase-outs due to their high toxicity to living organisms, environmental persistence, or potential for bioaccumulation, unless for acceptable purposes as defined by the conventions or protocols. Based on the findings of ESIA, specific mitigation measures for this risk will be integrated into the **ESMP.**	DGEC under MCV DD

#	Description	Risk category	Impact and Probability (1-5)	Risk treatment / management measures	Risk owner
9	Natural features with cultural significance, such as sacred forests, could be negatively impacted by outputs 2.2, 2.4, 3.1 and 3.2 .	Social and environ-mental	I = 3 L = 3 Moderate	<u>Assessment:</u> The **ESIA** will assess whether natural features with cultural significance will be impacted by the project, as locations are defined. Where they are found to be project-affected, FPIC consultations will be carried out with the objective of achieving initial consent from specific rights-holders, in line with Standard 6 requirements. Further **FPIC** consultations will be ongoing and followed during project implementation, following the measures summarized in the ESMF, in the Ethnic Groups Planning Framework (as IPPF) and in the Ethnic Groups Plan that will be prepared as part of the subsequent ESMP as required by ESIA assessment reports. ESIA and SESA will include a focus on natural features with cultural significance identification and analysis, with a strong participatory approach, to collect information from local communities about the meaning of the natural features, A **community mapping** will be included in the ESIA to ensure the communities' perception of the landscape and of the natural resources is taken into consideration and will inform the ESMP. <u>Management</u> The **Stakeholder Engagement Plan** - in which inputs from the **Ethnic Groups Plan** will be included - will include consultations with stakeholders involved in cultural heritage management, i.e. people in charge of conservation and management of sacred forest. The management of this risk will be included into the **ESMP,** based on ESIA findings, and in the Action Matrix, included in the SESA reports.	DGEC under MCV DD

#	Description	Risk category	Impact and Probability (1-5)	Risk treatment / management measures	Risk owner
10	Field and policy level activities related to the agricultural value chains selected and assessed (outputs 3.1 and 3.2) could inadvertently support child labour, forced labour, and other violations of international labour standards.	Social and environ-mental	I = 4 L = 3 Moderate	<u>Assessment and Management:</u> The **SESA and ESIA** will include a review of labour standards in each PDAs where the activities will be implemented, and propose safeguards including monitoring arrangements which will be integrated into the **ESMP** The SESA – and the related reports and Action Matrix - will also include study on how sustainable land and forest restoration might affect labour requirements, potentially increasing pressure to employ children, or use their labour on smallholdings.	DGEC under MCV DD
11	Informal farmers, or those without registered legal entitlement to the land they farm, may be excluded from project benefits.	Social and environ-mental	I = 3 L = 3 Moderate	<u>Assessment and Management:</u> The **ESIA** will identify the extent of this risk, and the level of impact it can have on the achievement of results. The findings will be incorporated in the **ESMP**, to ensure that lack of legal entitlement to land is not a barrier that restrict access to project benefits to only those with formalized land use rights. The risk will be managed also through the **Stakeholder Engagement Plan** and the **Ethnic Groups Plan**, where the attention will be focused on the most marginalized or at risk of marginalization groups.	DGEC under MCV DD
Implementation risks					
12	Risks associated with partnering with third parties	Organiza tional	I = 3 L = 3 **Moderate**	The SESA and ESIAs will conduct further assessment on risks associated with partnering with Third Parties and integrate specific procedures into the ESMPs, including specific requirements for such partners	DGEC under MCV DD

#	Description	Risk category	Impact and Probability (1-5)	Risk treatment / management measures	Risk owner
13	Risk of project interventions being affected by natural disasters	Social and environ-mental	I = 3 L = 3 **Moderate**	The SLM/SFM activities could be subject to hazards such as severe winds, storms and floods, etc. These and other project interventions could also be impacted by disasters, with resulting negative social and environmental impacts. For this reason, the Project will integrate disaster risk reduction measures into the detailed design and implementation of all SLM/SFM interventions.	DGEC under MCV DD
14	Risk that livelihoods action plan could be subject to political pressures	Political	I = 3 L = 3 **Moderate**	The plan will include safeguards designed to minimize political influence related to selection of livelihood types, locations and beneficiaries	DGEC under MCV DD
15	Risk of unclear institutional roles (overlaps, gaps) impeding project implementation	Organiza tional	I = 3 L = 3 **Moderate**	Stakeholder analysis and engagement plan includes emphasis on understanding relevant institutional mandates and roles. Where needed, coordination mechanisms will be established to defuse potential institutional conflicts before they become problematic	DGEC under MCV DD
16	Low capacity of the IP in procurement, which may lead to delays in the implementation of project activities	Organiza tional	I = 3 L = 3 **Moderate**	Recruitment of an experienced procurement specialist Retraining of the members of the public procurement commission of the IP on the public procurement code to support the project procurement specialist	DGEC under MCV DD
17	Weak knowledge of GEF and UNDP project management procedures	Organiza tional	I = 3 L = 3 **Moderate**	Although the risk is low, it will be necessary to build the capacity of the project team that will be recruited to produce and disseminate reports to the various stakeholders, including the grassroots population.	DGEC under MCV DD
18	Weak knowledge of GEF and UNDP financial procedures in project management	Organiza tional	I = 3 L = 3 **Moderate**	Strengthen the partner's capacities in accounting procedures, particularly in the separation of tasks, and carry out controls (Spot checks) to ensure the proper application of the knowledge acquired during this training	DGEC under MCV DD
COVID-19 related					

#	Description	Risk category	Impact and Probability (1-5)	Risk treatment / management measures	Risk owner
19	Continued or renewed efforts in COVID-19 containment are likely over the course of project development and possibly into implementation	Health and safety	Medium	The project development work plan and team will be built with this in mind, for example, maximizing experts in country. However, if the number of COVID19 cases increases beyond the currently low numbers and is not effectively contained, project start-up and implementation could be delayed. Methods for biosecure implementation will be needed, such as increased use of remote communication, use of PPE, etc.	DGEC under MCV DD
20	Limited capacity for remote work and interactions in Benin	Health and safety	Medium	The rural areas of Benin are not well equipped for remote work, in terms of wi-fi availability. The project will attempt to hold consultations in halls or open spaces, while observing government and UNDP safety protocols. Availability of international personnel on-site will depend on working in a post-pandemic scenario. However, if the pandemic persists, experience in Benin and elsewhere to date indicates that remote training and consultation methods can be developed and that planning work can be accommodated in this manner at halls and offices where Wi-Fi is available.	DGEC under MCV DD
21	Depending on the development of the pandemic in-country, it may be difficult to do community-level consultations	Health and safety	Medium	Local level consultation will comply with government guidelines and UNDP-CO guidelines. For example, it is likely that teams for field visits and consultations will be small, and they will likely meet and consult with small group sizes (under 50 people or per local guidelines). Additionally, COVID protocol will be developed and followed, such as testing, and supply of sanitizer and masks. In any case where either party is not comfortable to engage in discussions, it will not proceed. As much as possible, remote connections will be sought, for example via local government offices visiting communities.	DGEC under MCV DD
22	Government may be too occupied with COVID issues to deal with regular business	Health and safety	Low	At the national level, Government has its protocols in place for staff, and is requiring a full normal workload. Meetings are being conducted in small groups and via video. Unless there is a major increase in the pandemic, the risk is considered low.	DGEC under MCV DD
23	Impacts on co-financing could result	Health and safety	Medium	The availability of co-financing could be affected by changes in government fiscal priorities and exchange rates. Methods for safe implementation will be needed, such as increased use of remote communication, use of PPE, limited meetings. Government is, however, fully supportive of the project.	DGEC under MCV DD

Annex 7: Overview of technical consultancies / sub-contracts

Consultant	Time Input	Tasks, Inputs and Outputs
For Project Management		
Local / National contracting (individuals)		
Project team leader @ $3,500 / month (BN 62, 65)	36 months[100]	The Project team leader will be responsible for the overall management of the project, including the mobilization of all project inputs, supervision over project staff, consultants and sub-contractors. <u>Duties and Responsibilities</u> • Manage the overall conduct of the project. • Plan the activities of the project and monitor progress against the approved workplan. • Execute activities by managing personnel, goods and services, training and low-value grants, including drafting terms of reference and work specifications, and overseeing all contractors' work. • Monitor events as determined in the project monitoring plan, and update the plan as required. • Provide support for completion of assessments required by UNDP, spot checks and audits. • Manage requests for the provision of UNDP financial resources through funding advances, direct payments or reimbursement using the FACE form. • Monitor financial resources and accounting to ensure the accuracy and reliability of financial reports. • Monitor progress, watch for plan deviations and make course corrections when needed within project board-agreed tolerances to achieve results. • Ensure that changes are controlled and problems addressed. • Perform regular progress reporting to the project board as agreed with the board, including measures to address challenges and opportunities. • Prepare and submit financial reports to UNDP on a quarterly basis. • Manage and monitor the project risks – including social and environmental 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;

[100] This role will be combined with the livelihoods position, creating a single full-time position, the costs of which will be allocated on a 50:50 basis.

Consultant	Time Input	Tasks, Inputs and Outputs
		• Capture lessons learned during project implementation. • Prepare revisions to the multi-year workplan, as needed, as well as annual and quarterly plans if required. • Prepare the inception report no later than one month after the inception workshop. • Ensure that the indicators included in the project results framework are monitored annually in advance of the GEF PIR submission deadline so that progress can be reported in the GEF PIR. • Prepare the GEF PIR; • Assess major and minor amendments to the project within the parameters set by UNDP-GEF; • Monitor implementation plans including the gender action plan, stakeholder engagement plan, and any environmental and social management plans; • Monitor and track progress against the GEF Core indicators. • Support the Mid-term review and Terminal Evaluation process.
Procurement / finance specialist @ $2,000 / month (BN 62, 65)	60 months	Full-time appointment. With guidance from the National Project Director, and under direct supervision of the Project Manager, the Administration and Financial Officer will carry out the following financial management, accounting, and other tasks <u>Duties and Responsibilities</u> • Keep records of project funds and expenditures, and ensure all project-related financial documentation are well maintained and readily available when required by the Project Manager; • Review project expenditures and ensure that project funds are used in compliance with the Project Document and GoT financial rules and procedures; • Support the development of annual budgets and work-plans, and other operational and financial planning processes; • Review annual budgets and project expenditure reports and notify the Project Manager if there are any discrepancies or issues. • Validate and certify FACE forms before submission to UNDP; • Contribute to the preparation and implementation of progress and financial reports; • Provide necessary financial information as and when required for project management decisions; • Provide necessary financial information during project audit(s); • Review annual budgets and project expenditure reports, and notify the Project Manager if there are any discrepancies or issues; • Consolidate financial progress reports submitted by the responsible parties for implementation of project activities;

Consultant	Time Input	Tasks, Inputs and Outputs
		• Liaise and follow up with responsible parties for implementation of project activities in matters related to funds and financial progress reports. • Maintain data on co-financing commitments to the project using the required templates and ensure that all relevant financial data is supplied for the MTR and TE. • Assist as required in all procurement and recruitment processes, including payments for service providers
Admin and finance assistant @ $1,200 / month (BN 62, 65)	60 months	Full-time appointment. Working under the direct supervision of the project Manager, the Project Assistant will carry out the following tasks. <u>Duties and Responsibilities</u> • Assist the Project Manager in day-to-day management and oversight of project activities and maintaining relationships with key project stakeholders; • Assist the M&E Officer in matters related to M&E and knowledge resources management; • Assist in the preparation and distribution of project progress reports, all documentation required for Project Board and other meetings (such as the Inception Workshop, Introductory Meetings, and collation of the document packs for the MTR and TE; • Ensure all project documentation (progress reports, consulting and other technical reports, minutes of meetings, etc.) are properly maintained in hard and electronic copies in an efficient and readily accessible filing system, for when required by PB, TAC, UNDP, project consultants and other PMU staff; • Receive, screen and distribute all project correspondence; • Maintain the project equipment inventory; • Assist the Project Manager in matters related to M&E and knowledge resources management; • Coordinate the implementation of the stakeholder engagement plan; • Assist in the logistical organization of stakeholder meetings, training and workshops; • Prepare agendas and arrange field visits, appointments and meetings both internal and external related to the project activities and write minutes from the meetings; • Provide other PMU-related administrative and logistical assistance, as required.
Drivers @ $500 / month (BN 69)	120 months	Full time appointment: • Providing driving services • Providing maintenance of vehicles
For Technical Assistance		
Outcome 1 – Political, financial, institutional, and regulatory frameworks to achieve climate risk informed Land Degradation Neutrality (LDN) and advance integration of vulnerability assessments and adaptation options within land use decisions.		

Consultant	Time Input	Tasks, Inputs and Outputs
Local / National contracting (individuals)		
LC1 – Climate change vulnerability assessment geospatial analyst, Sustainable land use management: policy and planning specialist(s) @ $200 / day (BN1)	80 days	• Building on work done during PPG, complete detailed assessment of relevant equipment specifications, GIS and spatial analytic practices and capacity building requirements and provide targeted support to ensure effective participation in the process, particularly within DGEC under MCVDD (1.1.1) • Support and strengthen existing national networks for inter-sectoral data sharing, e.g., REDD+ national coordination mechanism, land-use planning ministry and other sectoral ministries, as they relate to LDN (1.1.2) • Develop an observatory for monitoring agricultural dynamics and the vulnerability of forest ecosystems, including climate risks, including agreeing on indicators to be monitored (1.2.1) • Prepare two biennial national reports (2024 and 2026) (1.2.3) • Analyze the structure, capacities and rules of operation of the Committee and propose any recommended changes, especially an explicit mandate to address climate change vulnerability and adaptation assessments and policies and to integrate them with LDN and REDD+ mechanisms. (1.3.1) • Support annual meetings of the Committee, expanded as needed to cover CCA, where a set of joint goals and a workplan will be adopted relate to data sharing and other joint actions in support of integrated LDN, REDD+ and CCA policies and actions will be adopted. (1.3.2) • Strengthen the technical capacity of ministries and other government agencies through the development of strategy documents (e.g., REDD+ strategy, climate vulnerability assessments and adaptation action plans, regular review of land degradation policies and activities) to contribute to the objectives adopted by the Committees (1.3.3) • Develop guidelines for Federal and local Government financing of climate-risk informed SLM, SFM and restoration efforts, and gender-responsive, climate-resilient agriculture, including eligibility criteria for grant or loan financing (1.4.1) • Develop a program of climate-risk informed SLM actions at national level with harmonized financing procedures and integration of environmental, economic and social aspects (1.4.2) • Insert an SLM budget line within the mechanism for transferring financial resources to municipalities (1.4.3) • Carry out multi-criteria climate change risk and SLM assessments, taking into account synergies and comparative advantages on the environment (1.5.2)

Consultant	Time Input	Tasks, Inputs and Outputs
PMU1 – Gender and safeguards specialist @ $3,000 / month (BN2, 7)	12 months	• Ensure project's adherence to all safeguard-related provisions associated with Component 1, including: ○ Support on drafting the ToR of the Strategic Environmental and Social Assessment (SESA) ○ Support on drafting the ToR of the Environmental and Social Impact Assessment (ESIA) – one for each PDA ○ Support on drafting the ToR for activity and site specific screeing using SESP ○ Support the PMU on the implementation of the Ethnic Groups Plan (as IPP) – one for each PDA ○ Support the PMU on the implementation of the Gender Action Plan ○ Support the PMU on the Implementation of the Stakeholder Engagement Plan ○ Support the PMU on the implementation of ESMP – one for each PDA
Contractual services companies (Subcontracts)[101]		
SC1 – Development of GIS and remote-sensing based monitoring system and associated activities, including training, pilot testing in PDAs - $161,250 (BN3)	*NA*	• Assess and strengthen existing cartographic databases of land use, climate hazards and risks, particularly agricultural uses, and associated land degradation and ecosystem services (1.1.3) • Build capacities for effective use of enhanced databases and maps (1.1.5) • Pilot testing in three PDAs of an operational system for monitoring agricultural dynamics and the vulnerability of forest ecosystems, based on existing and upgraded cartographic information (1.2.2) • Implement a training program for actors for key organizations, including Ministry of the environment, national geographic institute, national institute of agricultural resources, etc. (1.5.1) • Provide capacity building support (equipment and training) to Ministries and research institutions to enable management of 'the databases' (1.5.4) • Implement training programs to access, interpret and use climate scenarios and vulnerability assessments, and especially to adapt them to local conditions through downscaling and through locally collected data based on observations and interviews (1.5.5) • Build capacity for data collection on multiple climatic, biophysical and agro-ecological variables and participatory, scenario-based analysis to support local level planning for both climate change adaptation and land degradation neutrality (2.1.1)

[101] Sub-contracts may be issued nationally or internationally and, similarly, may involve local and / or international staff and services in their implementation.

Consultant	Time Input	Tasks, Inputs and Outputs
		• Field-level, participatory, survey-based data collection within the eight target communes to support climate risk and LDN analyses (2.1.2) • Work with the cartographic division of DGERC to integrate readily available, regional downscaled climate scenarios to create a spatially explicit dataset on climate hazards and map potential risks for land use and land cover change in the eight communes, where available use crop and plant habitat suitability models for common species, to inform SLM/SFM and land use planning, to inform the process for identifying climate-resilient value chains with local participation (Component 3) and develop up-to-date and improved land use, land degradation, soil fertility, climate hazard and risk-informed spatial analysis and zoning maps of the overall intervention area, i.e. eight target communes, together covering 2.2 million ha. (2.1.3) • Support the development of improved national baseline maps indicating land and forest status, soil type and soil fertility, as tools for monitoring LDN (1.1.4) (see also Activity 2.2.1)
Outcome 2 - Restoration of land and forest ecosystems for improved agricultural productivity, prevention of deforestation, and enhanced climate resilience of vulnerable communities.		
Local / National contracting (individuals)		
Short-term consultants for effective design and implementation of project safeguards, including preparation of ESIA and related management plans @ $200 / day (BN14)	75 days	• Development of the Strategic Environmental and Social Assessment (SESA) • Development of the Environmental and Social Impact Assessment (ESIA) – one for each PDA • Activity and site specific screeing using SESP • Development of the Ethnic Groups Plan (as IPP) – one for each PDA • Development of Livelihood Action Plan, if and where needed • Development of Pesticides and herbicides Action Plan • Development of the ESMP – one for each PDA • Support monitoring and Evaluation of ESMP and all the Safeguards related plans
Restoration specialist(s) @ $200 / day (BN14)	100 days	• Provide short-term technical support to design of individual restoration actions

Consultant	Time Input	Tasks, Inputs and Outputs
PMU1 – Gender and safeguards specialist @$3,000 / month (BN15)	6 months	○ Ensure project's adherence to all safeguard-related provisions associated with Component 2, including: ○ Support on drafting the ToR of the Strategic Environmental and Social Assessment (SESA) ○ Support on drafting the ToR of the Environmental and Social Impact Assessment (ESIA) – one for each PDA ○ Support on drafting the ToR for activity and site specific screeing using SESP ○ Support the PMU on the implementation of the Ethnic Groups Plan (as IPP) – one for each PDA ○ Support the PMU on the implementation of the Gender Action Plan ○ Support the PMU on the implementation of the Stakeholder Engagement Plan ○ Support the PMU on the implementation of ESMP – one for each PDA ○ Support the PMU on the implementation of Livelihood Action Plan, if and where needed ○ Support the PMU on the implementation of Pesticides and herbicides Action Plan
PMU2 – SLM/SFM and climate expert @ $3,000 / month (BN15)	72 months	• Support development of eight commune-level planning documents—"Schéma directeur d'aménagement de la commune" (SDAC) and "plan de développement communal" (PDC) (2.1.5) • Support development of eight commune-level planning documents—"Schéma directeur d'aménagement de la commune" (SDAC) and "plan de développement communal" (PDC) (2.1.6) • Mainstream SLM and SFM into eight commune-level Land Management Plans (PIGUS), including capacity-building strategies (2.1.7) • In coordination with international consultants, update management plans for the classified forests of Sota, Mékrou and Kouandé to include climate change scenarios and adaptation measures and sustainable land management, in line with commune-level plans, along with soil conservation and LDN plans for the classified forests of Alibori Supérieur and Trois Rivières (2.1.8) • Identify exact locations for land and forest restoration and sustainable management, building on PPG site selection process and incorporating additional climate scenarios and risk mapping work undertaken under 2.1.1 and 2.1.8, as well as nature of restoration or SLM/ SFM approach. (Note: Site selection will take into consideration climate risks (risk maps produced under 2.1.1) and opportunities to reduce them (e.g. by restoring erosion prone slopes and riparian forests), based on climate risk models and hazard maps and risk models. (2.2.1)

Consultant	Time Input	Tasks, Inputs and Outputs
		• Develop capacity building modules and materials, based on international experience, with specific adaptations for conditions in Benin as well as further specifications by PDA, covering: (i) integration of SFM and SLM in projects, business plans, laws and sector strategies; (ii) soil fertilization technologies; (iii) technologies for restoring degraded lands; (iv) approaches to maintaining soil fertility and respecting degradation neutrality standards; (v) Climate vulnerability and risk assessments through a combination of use of climate scenarios and local experiences and observations to inform the selection of crop and tree species and varieties, planting dates, soil management practices to increase water availability to crops (e.g. mulching), irrigation practices, crop diversification, provision of climate resilient crop varieties, etc.; (vi) methods of soil water conservation, (vii) safeguarding farms against risks (infestations, flooding, bush and vegetation fires, etc.); (viii) protection of forests against brush fires; (ix) cultivation technologies and fodder storage; (x) approaches and standards for forest management and the establishment of carbon sinks and protective belts; (xi) techniques for collecting and processing agricultural and forestry seeds; (xii) approaches and production methods of agricultural and forestry plants in a context of climate change, etc. (2.3.1) • Support delivery of training modules and materials to at least 1,000 national and local government and administration officials (including ATDAs, DGEC under MCVDD and DGEFC), parliamentarians and private sector representatives (2.3.2) • Participate in awareness raising seminars, workshops and information materials provided to decision-makers and other officials (2.3.3)
International / Regional and global contracting (individuals)		
Short-term consultants for effective implementation of project safeguards, including preparation of ESIA and related management plans @ $500 / day (BN13)	30 days	○ Development of the Strategic Environmental and Social Assessment (SESA) ○ Development of the Environmental and Social Impact Assessment (ESIA) – one for each PDA ○ Activity and site specific screeing using SESP ○ Development of the Ethnic Groups Plan (as IPP) – one for each PDA ○ Development of Livelihood Action Plan, if and where needed ○ Development of Pesticides and herbicides Action Plan ○ Implementation of Gender Action Plan ○ Implementation of Stakeholder Engagement Plan ○ Support monitoring and Evaluation of ESMP (One for each PDA) and all the Safeguards related plans.

Consultant	Time Input	Tasks, Inputs and Outputs
Climate change risks assessment and restoration specialist for support to plan development @ $500 / day (BN13)	30 days	• In coordination with local consultants, build capacity for data collection and analysis to support local level planning (2.1.2) • Conclude data sharing agreements amongst sectoral Ministries and national and local organisations (2.1.4) • Develop LDN scenarios and LDN neutrality targets—based on a combination of sustainable land management and restoration actions—and mainstream into emerging PDA Master Plans, with additional details for the participating communes (2.1.5) • Provide technical support to the development of eight commune-level planning documents—"Schéma directeur d'aménagement de la commune" (SDAC) and "plan de développement communal" (PDC) (2.1.6) • Build validated, multi-dimensional local plans that are aligned with existing SDACs and PDCs, and that can be easily integrated within the SDACs and PDCs, supported by recognized local governance structure (PDC) (2.1.7) • Mainstream climate change hazards, risks and adaptation options informed SLM and SFM into eight commune-level Land Management Plans (PIGUS), including capacity-building strategies (2.1.8) • In coordination with local consultants, conduct climate risk assessments for ecosystem based adaptation[102] using the climate hazards dataset (2.1.1), integrate relevant modeled outputs from GEF-CI SPARC and participatory input from communities to identify cost effective and locally relevant adaptation measures in order to update management plans for the classified forests of Sota, Mékrou and Kouandé to include climate change scenarios and adaptation measures and sustainable land management, in line with commune-level plans, along with soil conservation and LDN plans for the classified forests of Alibori Supérieur and Trois Rivières (2.1.9)
Contractual services companies (Subcontracts)[103]		
Data collection and management - $125,000 (BN16, 22)	*NA*	• Build capacity for data collection on multiple climatic, biophysical and agro-ecological variables and participatory, scenario-based analysis to support local level planning for both climate change adaptation and land degradation neutrality. (2.1.1) • Field-level, participatory, survey-based data collection within the eight target communes to support climate risk and LDN analyses (2.1.2)

[102] Using, for example, the GIZ – UNU guidance to practitioners (2018).

[103] Sub-contracts may be issued nationally or internationally and, similarly, may involve local and / or international staff and services in their implementation.

Consultant	Time Input	Tasks, Inputs and Outputs
		• Work with the cartographic division of DGERC to integrate readily available, regional downscaled climate scenarios to create a spatially explicit dataset on climate hazards and map potential risks for land use and land cover change in the eight communes, where available use crop and plant habitat suitability models for common species, to inform SLM/SFM and land use planning, to inform the process for identifying climate resilient value chains with local participation (Component 3), and develop up to date and improved land use, land degradation, soil fertility, climate hazards and risks' informed zoning maps of the overall intervention area, i.e. eight target communes, together covering 2.2 million ha. (2.1.3) • Support the development of data sharing agreements amongst sectoral Ministries and national and local organisations (2.1.4)
Participatory planning - $175,000 (BN16, 22)	*NA*	• Develop and ensure adoption of eight commune-level integrated, spatially explicit planning documents—"Schéma directeur d'aménagement de la commune" (SDAC) and "plan de développement communal" (PDC) (2.1.6) • Build validated multi-dimensional local plans that are aligned with existing SDACs and PDCs, and that can be easily integrated within the SDACs and PDCs, supported by recognized local governance structure (2.1.7) • Mainstream climate change hazards, risks and adaptation options SLM and SFM into eight commune-level Land Management Plans (PIGUS), including capacity-building strategies (2.1.8) • Conduct climate risk assessments for ecosystem based adaptation[104] using the climate hazards dataset (see 2.1.1), integrate relevant modeled outputs from GEF-CI SPARC and participatory input from communities to identify cost effective and locally relevant adaptation measures in order to update management plans for the classified forests of Sota, Mékrou and Kouandé , in line with commune-level plans, along with soil conservation and LDN plans for the classified forests of Alibori Superior and Trois Rivières (2.1.9)
Cropland conservation and rehabilitation - $840,000 (BN16, 22)	*NA*	• Provide extension and material support (e.g., equipment, seedlings, compost and other inputs) for conservation and improvement / restoration of cropland and conservation of soil fertility in identified priority locations (see 2.1.1) and in line with plans developed under Output 2.1 (2.2.2)
Forest conservation and	*NA*	• Provide extension and material support (e.g. equipment, seedlings and materials for the plant nurseries) for conservation and improvement / restoration of forest areas and conservation of soil fertility in identified

[104] Using, for example, the GIZ – UNU guidance to practitioners (2018).

Consultant	Time Input	Tasks, Inputs and Outputs
rehabilitation - $ 700,000 (BN16, 22)		priority locations (see 2.2.1) and in line with plans developed under activities 2.1.5 and 2.1.6 above, including enriching and developing protection series / green belt in the classified forests of Alibori Supérieur, Trois Rivers, Sota, Mékrou and Kouandé with versatile forest species with high tolerance to droughts and floods (2.2.3)
Reforestation for riverbank protection $ 525,000 (BN16, 22)	*NA*	• Protect the banks of the Ouémé, Zou and Couffo river basins against erosion through reforestation of 1,000 hectares of riparian forest using native species with high tolerance to drought and floods, in line with plans developed under Activities 2.1.5 and 2.1.6 (2.2.4)
Multi-purpose water reservoirs $350,000 (BN16, 22)	*NA*	• Establish multi-purpose water reservoirs to facilitate access to clean water by, and avoid conflict among, agricultural producers, livestock breeders and migrant and other vulnerable populations (2.2.5)
Extension service provision $455,000 (BN16, 22)	*NA*	• Through a participatory process including stakeholder mapping, the participatory mapping of climate hazards and risks, and land degradation vulnerability as perceived locally in combination with available data, identify local priorities and action plans for the promotion of climate resilient and degradation neutral agricultural, livestock and agroforestry practices and organize user groups (including women and youth groups) for each identified activity. (2.4.1) • Implement intensive training and extension programs in the pilot communities, led by local NGOs in partnership with community-based groups and under the guidance and supervision of government extension services. Considering the high number of illiterate people (especially women) in the rural population especially in the north of the country, extension methods will rely on face-to-face meetings rather than printed communication tools or social media. (2.4.2) • Develop radio programs on a range of climate change and land degradation topics, identified by a local advisory committee, and emit them in the most common local languages. (2.4.3) • Provide local groups with the essential tools and inputs for climate resilient agriculture and land restoration, such as farm tools, supplies for village nurseries, seedlings, etc. (2.4.4)
Green belt infrastructure development	*NA*	• Disseminate existing technical guidance materials developed by other initiatives (e.g. PROSOL) relating to “Integrated management of soil fertility”, “soil and water conservation”, “conservation agriculture” and “agroforestry and individual forests” (2.5.1)

Consultant	Time Input	Tasks, Inputs and Outputs
$600,000 (BN16, 22)		• Establish at least 200 ha of commercial plantations (150 ha of forest species and 50 ha of forage species) (2.5.2) • Support local communities to establish at least 100 ha of communal and individual fruit plantations (2.5.3) • Promote arboriculture as well as the vegetated delineation based on palm trees (rônier), néré and shea trees, which are all highly resilient to climate variability and drought and even support occasional fire, as a means of diversifying farming systems thereby reducing risks related to a largely unpredictable climate future. (2.5.4) • Promote the use of soil improving plants, e.g. mucuna, pigeon pea (*cajanus cajan*); and *Vigna radiata* for the restoration of degraded agricultural sites (noting that pigeon pea has been used in the West African savanna for many years and is noteworthy for its positive influence on associated food crops (e.g. maize) as well as a producer of edible seeds and fodder (2.5.5)
Outcome 3 – Building diversified income-generating activities and value chains to strengthen community resilience to climate change.		
Local / National contracting (individuals)		
PMU1 – Gender and safeguards specialist @$3,000 / month (BN 26, 30)	6 months	• Ensure project's adherence to all safeguard-related provisions associated with Component 3, including: ○ Support on drafting the ToR of the Strategic Environmental and Social Assessment (SESA) ○ Support on drafting the ToR of the Environmental and Social Impact Assessment (ESIA) – one for each PDA ○ Support on drafting the ToR for activity and site specific screeing using SESP ○ Support the PMU on the implementation of the Ethnic Groups Plan (as IPP) – one for each PDA ○ Support the PMU on the implementation of the Gender Action Plan ○ Support the PMU on the implementation of the Stakeholder Engagement Plan ○ Support the PMU on the implementation of ESMP – one for each PDA ○ Support the PMU on the implementation of Livelihood Action Plan, if and where needed ○ Support the PMU on the implementation of Pesticides and herbicides Action Plan
PMU3 – Livelihoods and climate vulnerability	36 months	• Undertake surveys within potential beneficiary communities to assess preferences among alternative value short-listed chains (3.1.2) • Select five priority value chains, based on pre-determined selection criteria and with reference to PDAs (3.1.3) • Prepare five value chain analyses, including priority measures needed to strengthen climate resilience. These should include, inter alia: (i) good practices and associated technologies for the storage / conservation and

Consultant	Time Input	Tasks, Inputs and Outputs
specialist[105] @ $3,500 / month (BN26, 30)		processing of various products (plants, animals, fisheries and forestry, etc.); (ii) the potential contribution of each product / value chain in terms of climate resilience, zero degradation or restorative production and gender-balanced income generation; (iii) specific barriers and opportunities associated with each value chain; (iv) climate change impact assessment across all priority value chains to identify the adaptation measures to reduce risks of climate related losses and damages (3.1.4); • Develop an action plan for strengthening each value chain (3.1.5) • Deliver training to strengthen agricultural skills related to the selected products, including: (i) techniques for managing soil fertility and (ii) climate-resilient agricultural practices (3.2.1) • Improve access to information and to appropriate post-harvest and processing and storage equipment and infrastructure, at different levels of the marketing chain, to help processors better respond to quantitative and qualitative aspects of market demand (3.2.2) • Contribute to the sustainable intensification of production in the selected sectors by supporting the adoption of improved technologies adapted to the needs of farmers, in particular women, and enabling them to better respond to market signals (3.2.3) • Support efforts by cooperatives to strengthen crop processing and storage (3.2.4)
Short-term consultants for effective implementation of safeguards related to component 3 @ $200 / day (BN29)	150 days	• In coordination with international consultant: ○ Development of the Strategic Environmental and Social Assessment (SESA) ○ Development of the Environmental and Social Impact Assessment (ESIA) -one for each PDA ○ Activity and site specific screeing using SESP ○ Development of the Ethnic Groups Plan (as IPP) – one for each PDA ○ Development of Livelihood Action Plan, if and where needed ○ Development of Pesticides and herbicides Action Plan ○ Development of the ESMP – one for each PDA ○ Support monitoring and Evaluation of ESMP and all the Safeguards related plans

[105] This role will be combined with the team leader position, creating a single full-time position, the costs of which will be allocated on a 50:50 basis.

Consultant	Time Input	Tasks, Inputs and Outputs
Value chain specialist(s), mapping and analysis of gender responsive climate resilient value chains, development of action plans and support to implementation @ $200 / day (BN29)	155 days	• In coordination with international consultants, map the short-listed value chains (3.1.1) • Undertake surveys within potential beneficiary communities to assess preferences among alternative value short-listed chains (3.1.2) • Select five priority value chains, based on pre-determined selection criteria and with reference to PDAs (3.1.3) • Prepare five value chain analyses, including priority measures needed to strengthen climate resilience. These should include, inter alia: (i) good practices and associated technologies for the storage / conservation and processing of various products (plants, animals, fisheries and forestry, etc.); (ii) the potential contribution of each product / value chain in terms of climate resilience, zero degradation or restorative production and gender-balanced income generation; (iii) specific barriers and opportunities associated with each value chain (3.1.4) • Develop an action plan for strengthening each value chain (3.1.5)
Partnership specialist @2$00 / day (BN29)	100 days	• In coordination with local consultants, develop market research and feasibility assessment for new products based on the "Market Analysis and Development (ADM)" approach and in consultation with potential beneficiaries (3.4.1) • Organize initial meetings between buyers and sellers, and trade shows and exchange trips in the West and Central African sub region and / or support the participation of local producer groups (including cooperatives) in such meetings (3.4.2) • Support improved packaging and delivery of new products to market (3.4.3) • Support identification of new business partners for SMEs (3.4.4)
International / Regional and global contracting (Individuals)		
Short-term consultants for effective implementation of safeguards related to component 3 @$500 / day (BN28)	32 days	• In coordination with local consultants, ○ Development of the Strategic Environmental and Social Assessment (SESA) ○ Development of the Environmental and Social Impact Assessment (ESIA) – one for each PDA ○ Activity and site specific screeing using SESP ○ Development of the Ethnic Groups Plan (as IPP) – one for each PDA ○ Development of Livelihood Action Plan, if and where needed

Consultant	Time Input	Tasks, Inputs and Outputs
		○ Development of Pesticides and herbicides Action Plan ○ Development of the ESMP – one for each PDA ○ Support monitoring and Evaluation of ESMP and all the Safeguards related plans.
Value chain specialists, mapping and analysis of gender responsive climate resilient value chains, development of action plans and support implementation @$500 / day (BN28)	200 days	• In coordination with local consultants, map the short-listed value chains (3.1.1) • Undertake surveys within potential beneficiary communities to assess preferences among alternative value short-listed chains (3.1.2) • Select five priority value chains, based on pre-determined selection criteria and with reference to PDAs (3.1.3) • Prepare five value chain analyses, including priority measures needed to strengthen. These should include, inter alia: (i) good practices and associated technologies for the storage / conservation and processing of various products (plants, animals, fisheries and forestry, etc.); (ii) the potential contribution of each product / value chain in terms of climate resilience, zero degradation or restorative production and gender-balanced income generation; (iii) specific barriers and opportunities associated with each value chain (3.1.4) • Develop an action plan for strengthening each value chain (3.1.5) • Deliver training to strengthen agricultural skills related to the selected products, including: (i) techniques for managing soil fertility and (ii) climate-smart agricultural practices (3.2.1) • Improve access to information and to appropriate post-harvest and processing equipment, at different levels of the marketing chain, to help processors better respond to quantitative and qualitative aspects of market demand (3.2.2) • Contribute to the sustainable intensification of production in the selected sectors by supporting the adoption of improved technologies adapted to the needs of farmers, in particular women, and enabling them to better respond to market signals (3.2.3) • Support efforts by cooperatives to strengthen crop processing and storage (3.2.4)
Partnership specialist @$500 / day (BN28)	100 days	• Develop partnership with micro-financing institutions to increase the flow of financial services (campaign credit, equipment credit, etc.) to encourage adoption of SLM and SFM practices (3.3.1) • Establish partnerships with local communities, NGOs, forest department directorates, and ATDAs to train farmers and ranchers (particularly women), in climate-smart agriculture (3.3.2) • Develop a de-risking mechanism to provide loan guarantees for micro-projects (3.3.3)

Consultant	Time Input	Tasks, Inputs and Outputs
		• In coordination with local consultants, develop market research and feasibility assessment for new products based on the "Market Analysis and Development (ADM)" approach and in consultation with potential beneficiaries (3.4.1) • Organize initial meetings between buyers and sellers, and trade shows and exchange trips in the West and Central African sub region and / or support the participation of local producer groups (including cooperatives) in such meetings (3.4.2) • Support improved packaging and delivery of new products to market (3.4.3) • Support identification of new business partners for SMEs (3.4.4)
Contractual services companies (Subcontracts)[106]		
Strengthening value chains - $653,063 (BN31)	*NA*	• Deliver training to strengthen agricultural skills related to the selected products, including: (i) techniques for managing soil fertility and (ii) climate-smart agricultural practices (3.2.1) • Improve access to information and to appropriate post-harvest and processing equipment, at different levels of the marketing chain, to help processors better respond to quantitative and qualitative aspects of market demand (3.2.2) • Contribute to the sustainable intensification of production in the selected sectors by supporting the adoption of improved technologies adapted to the needs of farmers, in particular women, and enabling them to better respond to market signals (3.2.3) • Support efforts by cooperatives to strengthen crop processing and storage (3.2.4)
Partnerships for income-generating activities - $838,000 (BN31)	*NA*	• Develop partnership with micro-financing institutions to increase the flow of financial services (campaign credit, equipment credit, etc.) to encourage adoption of SLM and SFM practices (3.3.1) • Establish partnerships with local communities, NGOs, forest department directorates, and ATDAs to train farmers and ranchers (particularly women), in climate-smart agriculture (3.3.2) • Develop a de-risking mechanism to provide loan guarantees for micro-projects (3.3.3)
Capacity-building of cooperatives - $302,000 (BN31)	*NA*	• In coordination with local consultants, develop market research and feasibility assessment for new products based on the "Market Analysis and Development (ADM)" approach and in consultation with potential beneficiaries (3.4.1)

[106] Sub-contracts may be issued nationally or internationally and, similarly, may involve local and / or international staff and services in their implementation.

Consultant	Time Input	Tasks, Inputs and Outputs
		• Organize initial meetings between buyers and sellers, and trade shows and exchange trips in the West and Central African sub region and / or support the participation of local producer groups (including cooperatives) in such meetings (3.4.2) • Support improved packaging and delivery of new products to market (3.4.3) • Support identification of new business partners for SMEs (3.4.4)
Outcome 4 – Gender Empowerment, Knowledge Management, and M&E		
Local / National contracting (Individuals)		
PMU1 – Gender and safeguards specialist @$3,000 / month (BN38)	12 months	Duties and Responsibilities • Monitor progress in implementation of the project Gender Action Plan ensuring that targets are fully met and the reporting requirements are fulfilled; • Oversee/develop/coordinate implementation of all gender-related work; • Review the Gender Action Plan annually, and update and revise corresponding management plans as necessary; • Work with the M&E officer and Safeguards Officer to ensure reporting, monitoring and evaluation fully address the gender issues of the project; • Raise awareness among project stakeholders regarding the goals, activities and objectives of the gender action plan (4.1.1) • Monitoring and adaptive management of implementation of the gender action plan to ensure that it is meeting its objectives (4.1.2) • Produce gender-sensitive communications and public awareness materials, e.g. leaflets, posters, flyers, brochures, summaries, videos, local radio spots, phone app, etc.) (4.4.2)
PMU 4 - Knowledge management / Monitoring and Evaluation specialist @$3,000 / month (BN38)	36 months	Duties and Responsibilities • Monitor project progress and participate in the production of progress reports ensuring that they meet the necessary reporting requirements and standards; • Ensure project's M&E meets the requirements of the Government, the UNDP Country Office, and UNDP-GEF; develop project-specific M&E tools as necessary;

Consultant	Time Input	Tasks, Inputs and Outputs
		• Oversee and ensure the implementation of the project's M&E plan, including periodic appraisal of the Project's Theory of Change and Results Framework with reference to actual and potential project progress and results; • Oversee/develop/coordinate the implementation of the stakeholder engagement plan; • Oversee and guide the design of surveys/ assessments commissioned for monitoring and evaluating project results; • Facilitate mid-term and terminal evaluations of the project; including management responses; • Facilitate annual reviews of the project and produce analytical reports from these annual reviews, including learning and other knowledge management products; • Support project site M&E and learning missions; • Visit project sites as and when required to appraise project progress on the ground and validate written progress reports. • Obtain agreement between project stakeholders and sectoral decision makers at the national level on simple indicators, applicable to all sectors, linked to integrated, gender sensitive, sustainable responses to climate change (4.2.4) • Develop a national information, education and communication (IEC) plan targeting all relevant actors, including, inter alia: (i) educational materials in order to increase knowledge and awareness among educators and to encourage teaching sessions in secondary schools and universities on Land Degradation Neutrality and climate change adaptation; (ii) an inclusive dialogue platform between scholars, customary and religious authorities, vulnerable groups and representatives of sectoral ministries around the inclusive management of natural ecosystems for climate resilience and LDN (4.4.1) • Conduct briefings with target groups on project experience, as well as best practices and lessons learned, on topics such as gender and LDN, climate change resilience, etc. (4.4.3) • Organize a series of physical and virtual exchanges—e.g. visits, workshops, knowledge products—with counterpart project team and stakeholders in neighboring Togo (4.4.4)
Project evaluation specialists for mid-term and final	40 days	• Conduct mid-term and final project evaluations

Consultant	Time Input	Tasks, Inputs and Outputs
evaluation @$200 / day (BN53)		
Local consultant support for tracking and monitoring of diffusion and related M&E surveys @ $200 / day (BN37)	200 days	• In coordination with the local consultants, pilot testing of a system of participatory monitoring, review and verification (MRV) of land and forest degradation, climate hazards, potential risks and likely impacts (4.2.2) • Implement a system of monitoring changes in livelihood status and adaptive capacity for vulnerable people targeted (4.2.3) • Produce reports estimating LDN implementation across the three PDAs, integrating data gathered by participatory and other means (4.2.5) • Monitoring and assessment of project impacts and associated lessons emerging (4.3.1) • Based on project results / demonstrations, develop and implement a training and dissemination plan aimed at women's groups and mixed farmers' organizations to support the further uptake of implementing technologies for the restoration of natural ecosystems, innovation in soil water conservation, etc. (4.3.2) • Develop and disseminate technical guidance on adoption of climate resilient value chains integrating climate risks, to enhance productivity and climate resiliency of targeted value chains and agroforestry systems (4.3.3) • Organize networking sessions to share experiences between the intervention municipalities on the one hand, and other municipalities within the three PDAs (4.3.4) • Strengthen the capacities of women, young people and small producers in the management of digital tools (financial, digital education, e-commerce, etc.) for better climate resilience (4.3.5) • Organize exchange trips / visits between PDAs and capacity building for the benefit of stakeholders on SLM/SFM (4.3.6)
International / Regional and global contracting (Individuals)		
Project evaluation specialist(s) for mid-term review and final evaluation @$500 / day (BN52)	40 days	• Conduct mid-term and final project evaluations

Consultant	Time Input	Tasks, Inputs and Outputs
Expert in behavioural change, diffusion of agricultural innovations and climate change @$500 / day (BN36)	19 days	• Strengthen capacities, particularly among women and young people, to contribute to monitoring and evaluation of interventions for the sustainable and climate-resilient management of land and forest ecosystems at the local, municipal and PDA levels (1, 2, and 5) (4.2.1)