Concept Note

Cashew nut sector and entrepreneurship development support project for Benin (PADEFA-ENA)

Benin | AfDB

1 February 2019
Concept Note

Project/Programme Title: Cashew nut sector and entrepreneurship development support project for Benin (PADEFA-ENA)

Country(ies): Republic of Benin

National Designated Authority(ies) (NDA): Directorate of Environment, Ministry of Environment

Accredited Entity(ies) (AE): African Development Bank

Date of first submission/version number: 2019-01-31 [V.1]

Date of current submission/version number: 2019-01-31 [V.1]

Please submit the completed form to fundingproposal@gcfund.org, using the following name convention in the subject line and file name: “CN-[Accredited Entity or Country]-YYYYMMDD”
## Notes

- The maximum number of pages should **not exceed 12 pages**, excluding annexes. Proposals exceeding the prescribed length will not be assessed within the indicative service standard time of 30 days.
- As per the Information Disclosure Policy, the concept note, and additional documents provided to the Secretariat can be disclosed unless marked by the Accredited Entity(ies) (or NDAs) as confidential.
- The relevant National Designated Authority(ies) will be informed by the Secretariat of the concept note upon receipt.
- NDA can also submit the concept note directly with or without an identified accredited entity at this stage. In this case, they can leave blank the section related to the accredited entity. The Secretariat will inform the accredited entity(ies) nominated by the NDA, if any.
- Accredited Entities and/or NDAs are encouraged to submit a Concept Note before making a request for project preparation support from the Project Preparation Facility (PPF).
- Further information on GCF concept note preparation can be found on GCF website [Funding Projects Fine Print](#).
### A. Project/Programme Summary (max. 1 page)

<table>
<thead>
<tr>
<th>A.1. Project or programme</th>
<th>A.2. Public or private sector</th>
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<tbody>
<tr>
<td>☒ Project</td>
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<td>Yes ☐ No ☒ If yes, specify the RFP:</td>
<td>☐ Confidential ☒ Not confidential</td>
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<th>A.5. Indicate the result areas for the project/programme</th>
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<tr>
<td>Mitigation: Reduced emissions from:</td>
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<tr>
<td>☐ Energy access and power generation</td>
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<td>☐ Low emission transport</td>
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<td>☐ Buildings, cities and industries and appliances</td>
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<td>☒ Forestry and land use</td>
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<td>Adaptation: Increased resilience of:</td>
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<td>☒ Most vulnerable people and communities</td>
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<td>☒ Health and well-being, and food and water security</td>
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<td>☐ Infrastructure and built environment</td>
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<td>☒ Ecosystem and ecosystem services</td>
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<th>A.6. Estimated mitigation impact (tCO2eq over lifespan)</th>
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<td>4, 4 MtCO2</td>
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<th>A.7. Estimated adaptation impact (number of direct beneficiaries and % of population)</th>
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<td>50,000 along the value chain (50% women)</td>
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<td>☒ Grant ☐ Reimbursable grant ☐ Guarantees ☐ Equity ☐ Subordinated loan ☐ Senior Loan ☐ Other: specify ____________________________</td>
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<th>A.10. Mark the type of financial instrument requested for the GCF funding</th>
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<td>☒ Grant ☐ Reimbursable grant ☐ Guarantees ☐ Equity ☐ Subordinated loan ☐ Senior Loan ☐ Other: specify ____________________________</td>
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<th>A.11. Estimated duration of project/programme:</th>
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<td>a) disbursement period: 5.5 years</td>
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<td>b) repayment period, if applicable:</td>
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<th>A.12. Estimated project/Programme lifespan</th>
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<td>5 years</td>
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<th>A.13. Is funding from the Project Preparation Facility requested?</th>
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<td>Yes ☐ No ☒ Other support received ☐ If so, by who:</td>
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<th>A.14. ESS category</th>
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<td>☒ A or I-1 ☐ B or I-2 ☐ C or I-3</td>
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<th>A.15. Is the CN aligned with your accreditation standard?</th>
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<th>A.16. Has the CN been shared with the NDA?</th>
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<th>A.17. AMA signed (if submitted by AE)</th>
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<td>Yes ☒ No ☐ If no, specify the status of AMA negotiations and expected date of signing:</td>
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<th>A.18. Is the CN included in the Entity Work Programme?</th>
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<td>Yes ☒ No ☐</td>
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<th>A.19. Project/Programme rationale, objectives and approach of programme/project (max 100 words)</th>
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<td>Brief summary of the problem statement and climate rationale, objective and selected implementation approach, including the executing entity(ies) and other implementing partners.</td>
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<td>Climate projections for Benin reveal that annual maximum temperature will increase by up to 2.5–3.0°C by the 2090s (Jalloh et al., 2013). The projections also indicate that climate change effects would vary a great deal across the country with the most harmful effects being felt in the northern parts of the country. This would include among others, accelerated desertification, the impacts of which on the agricultural sector include an average of 5 to 20% decline in the yield of the major crops such as the cashew nut tree.</td>
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1 Concept notes (or sections of) not marked as confidential may be published in accordance with the Information Disclosure Policy (Decision B.12/35) and the Review of the Initial Proposal Approval Process (Decision B.17/18).

2 See here for access to project preparation support request template and guidelines

3 Refer to the Fund’s environmental and social safeguards (Decision B.07/02)
Cashew nut is the second largest export product after cotton in the country. The sub-sector contributes over 3% of the country’s GDP and about 7% to the agricultural value added to GDP. It is estimated that more than 200,000 people make their livings in the sector: 30% of whom are women and young people. The potentialities of the cashew nut sector in Benin include the existence of an under-explored local and sub-regional market for the sale of white and roasted nuts, the potential of the growing bio-equitable market in Europe and job creation opportunities for women and young people.

The goal of the project therefore, is to contribute to the reduction of poverty and the increase of food and nutritional security in Benin through the Cashew nut sub-sector. The specific objective is to contribute to the sustainable increase in incomes of the actors and the productivity of the cashew value chain.

The implementation approach of the project is based on the value chain and sectoral integration approach to create an environment conducive to the involvement of SMEs, youth and women’s employment, and to achieve sustainable impact on local development.

ATDA 4, an autonomous agency under the Ministry of Agriculture, will implement the project, which will establish partnerships with specialized organizations to execute or supervise specific tasks within their field of expertise.

B. Project/Programme Information (max. 8 pages)

B.1. Context and baseline (max. 2 pages)

Describe the climate vulnerabilities and impacts, GHG emissions profile, and mitigation and adaptation needs that the prospective intervention is envisaged to address.

Forecasted Climate change (CC) impacts on agriculture including the cashew sector

The impacts of CC on the agricultural sector include an average of 5 to 20% decline in the yield of the major food crops in the country (Paeth et al. 2008; http://www.sow.vu.nl/Activities/Benin.html). The cashew nut sector in Benin is characterized by low yield of plantations (350 kg/ha against a world average of 900 kg/ha). Average yield per hectare in 2017 was estimated at 370 kg, which showed a decline in comparison to 2015 (395kg/ha) and 2014 (400kg/ha).

The climatic and geomorphological conditions in the northern and central regions in the country, namely the Guinean zone and the Sudano-Guinean zones where the project zone is located are suitable for cashew production (Tandjekpon, 2010) The project zone also includes the Department of Collines and the South Borgou Department, as well as the North Borgou, North Donga and the South of the Collines Department. According to Yai et al., 2014, these agro-ecological zones are affected by climate change, which made them particularly vulnerable to drought, late and heavy rains and floods. According to Boko et al. (2007), Climate change has a direct impact on agricultural production, since agricultural systems depend on the nature of the climate. Balogoun et al. (2014) characterized the cashew production systems in the main cashew growing areas (the project zone), and reported that scarcity and poor distribution of rainfall, harmattan with dry winds and low temperatures are some of the major conditions negatively affecting cashew production. For example, their studies also indicate that climate variability causes drying, abortion and the fall of flowers, leaves and fruits, thus reducing the productivity of cashew trees.

In a study conducted in the Project zone, Bello et al. (2017) reported the perceptions of local cashew producers concerning the climate change effect on cashew productivity. According to their study, climate change indicators as perceived by the producers included an increase in temperature and decrease in rainfall and the occurrence of violent winds as well as high rates of dried flowers and cashew yield losses.

Bello et al. (2016) carried out a study in the major cashew production area in Benin to analyze the climatic data of the last 10 years and future climate trends and their impact on cashew nuts yield in the country. They reported an increasing trend, with rates ranging from 0.02% to 24%, of temperature between 1970 and 2015. Besides, the study predicted up to a 12% decrease in rainfall by 2050 in the northern cashew-growing zone, and concurred of an increase in mean temperature in the range of 20-30% viz. 4.02°C by 2100. The authors reported declining cashew nuts yields, which correlated with the increase in temperature and decrease in rainfall. The authors concluded that rainfall, mean temperature and Potential Evapotranspiration (PET) have negative influence and are the main factors that determine cashew productivity in the major production zone.
Mitigation and adaptation needs, which the Project will address

As climate change begins to manifest itself and populations/communities become more exposed to increased climate variability including more frequent and intense extreme weather, the need to address climate risks is becoming urgent, especially in the climate change-prone project zone in Benin. Therefore, the project will help strengthen the adaptive capacity and climate resilience of the vulnerable communities. By ensuring delivery of services to communities, the project will benefit highly vulnerable groups, including the 70% of country’s population whose livelihoods are dependent on the country’s predominantly rain-fed agriculture and about 3 million people directly exposed to drought or flooding in the project zone.

The request for GCF funding aims at supporting the cashew nut sector development in Benin, particularly the needs for mitigation (reduced emissions from forestry and land use) and adaptation (increased resilience of local vulnerable communities and food security). Therefore the project has integrated in its formulation, climate risk management tools with the objectives to: (i) strengthen the resilience of local communities and cashew nut production systems; (ii) reduce GHG emissions; and (iii) strengthen the protection of communities, especially those of the most vulnerable to climate change-induced disasters.

Addressing mitigation and adaptation needs in the project zone:

(a) Strengthening the resilience of land use for resilient cashew nut production systems through dissemination of sustainable land use management (SLM) technologies to increase productivity. The project will support large-scale promotion of SLM measures to address the impacts of climate change in the project zone. The use of improved techniques is an effective solution to ensure better climate risk management while maintaining a high level of soil fertility, and thus the resistance of the cashew nut plantations. On the other hand, the mulching of soil at the cashew plant's feet, using plant residues is an improved technique that allows, among other things, the soil moisture to be preserved at the plant’s feet, to limit soil erosion by curbing runoff, to fertilize the soil through the degradation of soil organic matter. These are well-known practices of the producers but which unfortunately are not implemented in a systematic way even if the need is felt.

Besides, the project will support the development and dissemination of improved techniques from grafted plants to maximize their carbon sequestration potential in new cashew plantations, and rehabilitation techniques for old cashew plantations. In this regard, the project will support the national Agricultural research Program (INRAB) for the production of improved plant material to cover the rehabilitation needs of 38,000 ha and the expansion of cashew plantations (8,500 ha). In fact, perennial fruit trees, including cashew tree, an evergreen fruit tree, occupies nearly 200,000 ha in the country and has potential for carbon sequestration. Many studies have documented the Carbon sequestration potential of cashew nut plantations (Noiha Noumi, et al., 2018). The amount of carbon storage in the cashew stands was at times reported superior as compared to that assessed in several agroforestry systems or degraded second forest in Cameroon and in Congo (Noiha et al. 2017; Mosango 1991; Zapfack 2005). Therefore, the project will support INRAB with the following expected results: increase in the number of (i) existing mother cashew nut trees (600 for 120,000 grafts per year), (ii) germplasms (5 per 200 clones of higher trees); (iii) 30 polyclonal orchards of 5 hectares each and 20 irrigated woodpacks of 5 hectares each; (iv) the installation of 20 demonstration plots and field schools for the dissemination of innovations and new technologies.

(b) Weather, climate and warning system information

Currently, early warning efforts for the agricultural sector in Benin remain to be improved. In fact, the services offered by various institutions include, among others, the seasonal forecast bulletin for agro-climatic characteristics, the agro-meteorological news bulletin and the daily forecast bulletin according to the coverage of stations and other data. The form and content of these reports are not specific and therefore cannot fully meet the needs of weather and climate information of agricultural stakeholders including cashew producers. Therefore, the project will set up an early warning system that values meteorological and climatic data in order to produce accurate and specific information for the different actors in the cashew sector. Reliable climate information and weather data will be transmitted to farmers through mobile apps with the collaboration of the national met service and the national telecommunication authority.

(c) Agricultural insurance is of paramount importance for the development of agricultural value chains. It is also a privileged tool for managing climate-related agricultural risks. To this end, the project will support relevant actions to enable cashew producers to secure their plantations through existing agricultural insurance schemes in the country.
The implementation of the afore-mentioned activities is expected to strengthen the resilience of producers and production systems to climate change.

Please indicate how the project fits in with the country’s national priorities and its full ownership of the concept. Is the project/programme directly contributing to the country’s INDC/NDC or national climate strategies or other plans such as NAMAs, NAPs or equivalent? If so, please describe which priorities identified in these documents the proposed project is aiming to address and/or improve.

In relation to climate change, Benin has a comprehensive and progressive institutional framework, and has established agencies to work cross-sectorally to support natural resource management, notably the Directorate-General for the Environment and Climate (DGEC) within the Ministry of Environment and Sustainable Development (MCDVDD). In addition, a National Fund for Environment and Climate Change (FNEC)) has been established to address cross-sector financing needs. Policies and strategies include the National Action Plan to Combat Desertification, the Low Carbon and Climate Resilient Development Strategy, the First Nationally Determined Contribution (CDN) and the National Policy on climate change being adopted. In accordance with the GCF’s environmental and social safeguards the Project, as included in the funding proposal, is in conformity with the relevant national laws and regulations. The Project takes into account the main orientations contained in the policies and strategies developed in response to climate change and in compliance with international agreements ratified by Benin, namely the United Nations Convention on Climate Change, (UNFCCC), the Kyoto Protocol and the Paris Agreement.

Furthermore, to counter the climate risks, Benin has developed a strategy for low-carbon and climate-resilient development that spans the period 2016-2020. The Strategy is designed to better prepare the country to face the adverse effects of climate change, in particular through adaptation measures to climate change on the one hand, and the contribution to the reduction of GHG emissions, on the other hand.

The project therefore aligns very well with the country’s 2016-2020 strategy for low-carbon and climate-resilient development. Particularly objectives: (i) to strengthen the resilience of local communities and economic production systems (OS-1); (ii) reduce anthropogenic GHG emissions (OS-2), and (iii) strengthen the protection of communities, especially those of the most vulnerable to natural disasters (OS-3).

The Project zone alone accounts for more than 87% of the country's cashew production. It has significant agricultural potential, yet not fully exploited and is one of the regions with the highest poverty rates in the country. By prioritizing women, youth and small producers, as well as private-led cashew nut processing initiatives, the Project will contribute to the long-term mitigation of food and nutrition insecurity and the persistence of poverty, thus meeting the expected impacts of the country's 2016-2020 strategy for low-carbon and climate-resilient development pathways. Besides, the project will promote the production systems associating cashew with the relevant food crops in order to meet food and nutritional security needs while producing and processing cashews for the market (increase in the income level of actors in the market). The project will also test a model of sustainable management of tree plantations based not only on the capacity of cashew plantations to store carbon and to fight against land degradation and erosion but also on their ability to diversify the resources available to sustain the livelihoods of local people in the context of adaptation to climate change. Thus, the Project offers the opportunity, in the context of the fight against climate change, to achieve a triple gain in terms of mitigation and adaptation to climate change and poverty reduction. In total, the Project will directly reach 50,000 persons in the sector, 50% of whom are women.

Describe the main root causes and barriers (social, gender, fiscal, regulatory, technological, financial, ecological, institutional, etc.) that need to be addressed.

The Project will address the following barriers and challenges:

**Social and gender:** (i) the marginalization of the youth and women in relation to their access to land; the modes of access to land are multiple, varied and uncertain, which do not encourage long term investment in farming; (ii) **Regulatory:** lack of coherent policies and specific actions to promote the development of the cashew value chain; (iii) **Technological & Ecological:** low productivity of old-age cashew plantations, and poor management practices and maintenance of plantations by producers; inefficient post-harvest processing of the nuts; difficult access to inputs and efficient equipment; (v) **Financial:** lack of control of the processing techniques by the processors; (iv) **Institutional:** (viii) low level of organization of the actors and weak capacity of the actors in the management of their business.

Where relevant, and particularly for private sector project/programme, please describe the key characteristics and dynamics of the sector or market in which the project/programme will operate.
It is noteworthy that the cashew nut is the second largest export product after cotton. The sector provides 3% of the GDP and 7% of the country's agricultural GDP; 8% of export earnings and 25% of Benin's export agriculture revenues. It is estimated more than 200,000 people make their livings in the sector, 30% of whom are women and young people. The potentialities of the cashew nut sector in Benin include the existence of an under-explored local and sub-regional market for the sale of white and roasted nuts, the potential of the growing bio-equitable market in Europe and job creation opportunities for women and young people.

SUMMARY OF THE KEY CHARACTERISTICS & DYNAMICS OF THE CASHEW NUT SECTOR IN BENIN

The cashew nut sector is one of the high added value chains promoted by the Government (PAG, 2016-2021) due to: (i) potential for carbon sequestration; (ii) its strong ability to contribute job and income creation for youth and women; (iii) its contribution to food and nutrition security; and (iv) its great opportunity for export. In fact, cashew is the country's second largest agricultural export product after cotton and provides 3% of GNP, 7% of agricultural GNP; 8% of export earnings and 25% of Benin's export agriculture revenues. Taking into account the strategic orientations of the Country (PAG, 2016-2021), the formulation of the Project put a particular emphasis on: (i) addressing climate change and building resilience of farming communities and production systems; (ii) food and nutritional security, (iii) development of the value chain, including the local processing of cashew nut; and (iv) employment of youth and women.

Cashew plantations that are between 10 and 20 years old have the highest yields estimated at 446 kg/ha at the national level and around 500 kg/ha in the project zone of Donga, Atacora and Borgou (MAEP/ ProCAD/PADA, 2017; Rapport de l'Enquête d’estimation du rendement de l’anacarde au Benin). Average area cropped to cashew nut trees in the project area is 2.46 ha per farmer. The gross margin per hectare in the production cruising year between 10 and 20 years may go up to XOF 800,000 – 900,000 equivalent to about USD 2,000.

Below is the summary of the major characteristics of the cashew sector in the country’s economy.

- Trend of growth (on average): 10-15% per year - for the last 15 years
- 100,000 to 120,000 metric tons of raw nuts produced in 2015 (10-15% smuggled from across neighboring countries) of which: 98% exported raw and 2% processed into white almonds for export
- Estimate of the value of raw cashew produced in Benin = USD 51 million (CFA30.6 billion)
- Benin ranks as the 9th largest exporter of cashew nuts in the world (after being in the Top 5 in 2013) and 3rd in Africa
- 3% of GNP and 7% of Benin's agricultural GNP (2nd after cotton)
- 8% of Benin's export earnings and 25% of Benin's export agriculture revenues
- Number of cashew farmers: 200,000 (estimated in 2015)
- Number of hectares covered: 200,000 (estimate in 2015)
- Average farm size: 1 hectare
- Affiliation to groups Farmer based: 10% = 20000
- Age of trees: mostly old plantations
- Number of semi-industrial cashew processing units in December 2015 = 6
- Processing capacity: 11,500 tons (estimate at 31/12/2015)
- Real production of white almonds in 2015: 3,000 metric tons

B.2. Project/Programme description (max. 3 pages)

Describe the expected set of components/outputs and subcomponents/activities to address the above barriers identified that will lead to the expected outcomes.

The project will increase the resilience of vulnerable cashew nut farming communities to climate change in northern and central regions of Benin. PADEFA-ENA will make the best use of the carbon sequestration potentials known of cashew nuts trees, especially in the project Component A, ‘Resilience of cashew producers and increase in the carbon sequestration potential of cashew nut trees’

Project Components and Activities

Component A: Resilience of cashew producers and increase in the Carbon Sequestration Potential of cashew nut trees

In Benin, the preferred option by the authorities in charge of the Agriculture sector is to significantly improve, in a sustainable manner, the production of cashew nuts plantations using improved planting material coupled with best
agricultural practices. In so doing, it is expected a substantial increase in yields, which could increase from the current 400 kg/ha to 750 kg/ha at the end of the Project.

In the specific case of the present project, the actions and activities related to the climate and particularly to adaptation and mitigation are structured around two sub-components.

**Subcomponent A1: Support for Carbon Sequestration - Rehabilitation and Extension of Cashew Plantations**

Subcomponent A1 aims to strengthen cashew nut production by making available improved and efficient planting material to cover the rehabilitation needs of 38,000 ha of old-age plantations and the extension of 8,500 ha of new plantations. The expected increase in cashew nut production will be through (i) the implementation of a relevant research program to increase the number of existing mother trees (450 mother trees per 112,500 grafts per year), germplasms; polyclonal orchards of 5 hectares each and 2 irrigated wood parks of 5 hectares each; (ii) support for the installation of new modern orchards of cashew trees; (iii) the installation of 20 ha of demonstration plots and field schools across the Project area for the dissemination of new climate smart production innovations.

**Subcomponent A2: Support to producers and creation of pools of private service providers.** Support for the training of 50 agricultural trainers advisors for the supervision of 25,000 producers. Support to 5,000 young people and women private service providers in 10 new identified areas along the cashew nut value chain for sustainable jobs.

**Component B: sustainable development of value chains**

**Subcomponent B1: Organization, structuring and reinforcement of the actors.** The activities will be include: (i) support for the restructuring of cashew nut sub-sector, in particular the producers’ organizations at the levels of village, municipal unions, and departmental unions; (ii) support to national professional federations in the sector; and (iii) institutional support (IFA).

**Subcomponent B2: Support to entrepreneurship of young people and women.** Support for the installation of 5,000 young PSPs (30% of them women) through innovative financing mechanisms; Support to access funding for youth groups (30% women) in the cashew nut sector. Establishment of incubators in the sector for young people and women.

**Subcomponent B3: Promotion of cashew processing and marketing.** (i) Support for the certification and labelling of cashew nuts along the processing value chain; (ii) support for the operationalization of a central purchasing and management of cashew nut stocks; (iii) promotion and development of cashew clusters; (iv) modernization of 10 cashew processing units for women;

**Component C: Project management and coordination**

This component will include support for project coordination, monitoring and evaluation, reporting, financial management, procurement and environmental and social safeguards, technical and financial audits, development of project implementation manuals, and communication materials.

*In terms of rationale, please describe the theory of change and provide information on how it serves to shift the development pathway toward a more low-emissions and/or climate resilient direction, in line with the Fund’s goals and objectives.*

PADEFA-ENA will promote agricultural production systems, which associate cashew tree to the domestic food crops in order to meet food and nutritional security needs of the country, while producing and processing cashews for the market (increase in the income level of actors along the value chain). Besides, the project will test a model of sustainable management of tree plantations based not only on the capacity of cashew plantations to store carbon and to fight against land degradation and erosion, but also on their ability to diversify the resources available to improve on the livelihoods of local people in the context of adaptation to climate change. The Project offers the opportunity, in the context of the fight against climate change, to achieve a triple gain in terms of mitigation and adaptation to climate change and poverty reduction.

*Describe how activities in the proposal are consistent with national regulatory and legal framework, if applicable.*

The project fits perfectly in the orientations of the country’s strategy plan for the development of the agricultural sector (PSDSA, 2017-2025) in terms of improving productivity and production levels, structuring and developing value-added chains, strengthening the resilience of the vulnerable populations and production systems. Likewise, PADEFA-ENA takes into account the main orientations contained in the policies and strategies developed in response to climate change and
in compliance with international agreements ratified by Benin, namely the United Nations Convention on Climate Change, (UNFCCC), the Kyoto Protocol and the Paris Agreement. Policies and strategies include the National Action Plan to Combat Desertification, the Low Carbon and Climate Resilient Development Strategy, the First Nationally Determined Contribution (CDN) and the National Policy on climate change being adopted.

Describe in what way the Accredited Entity(ies) is well placed to undertake the planned activities and what will be the implementation arrangements with the executing entity(ies) and implementing partners.

The implementation of the project will be facilitated by Benin's legal and institutional framework favorable to the implementation of adaptation actions to climate change. Indeed, there is a Ministry in charge of Environment and sustainable Development ("Ministère du Cadre de Vie et du Développement Durable", MCDVDD) with its technical directorates including the Directorate General for Environment and Climate (DGEC, the Accredited Entity) whose mission is to develop and ensure the implementation and monitoring and evaluation of national policy and strategies on the environment, managing the effects of climate change and promoting the green economy in collaboration with other relevant structures. The same is true of the Environment and Climate Fund (FNEC), which is responsible, among other things, for supporting programs and projects relating to the protection of the environment and the improvement of the living environment of the population and to monitor and evaluate the implementation of projects and their impact on the environment. The DGEC and the National Committee on Climate Change (CNCC), a reference body in the country, will support the project as part of their national mandates.

Please provide a brief overview of the key financial and operational risks and any mitigation measures identified at this stage.

The achievement of the project's anticipated results may be jeopardized by the potential risks listed below. However, the proposed mitigation measures will make it possible to risks for the proper execution of the project. The table below summarizes the risks, their level and mitigation measures.

Financial:

Risk1: collapse of global demand and prices for cashew nut as a result of economic meltdown.
Mitigation1: The Project will support the construction/rehabilitation of modern warehouse stores; the warehouse receipt system may help shield the local producers and processors against the decline in international cashew trade.

Risk2: Limited access by producers and processors to financing opportunities in the country:
Mitigation2: The Project will put in place a mechanism for financing producers and SMEs for the development of the cashew value chain through one of the window of the newly created national investment fund.

Operational:

Risk3: Cohabitation of "modern" and traditional rules on land can create misunderstandings about rights of use and/or ownership of lands, which may then be challenged by third parties.
Mitigation3: Any new planting under the project will have to be done on a land enjoying a title deed or ownership recognized by applicable regulations.

Risk4: Lower than expected yields, failure of plantations as a result of the effect of climate change and unsuitable farming practices of the producers.
Mitigation4: The project will support the development, dissemination and then adoption of climate-smart technical innovations by the producers to help sustainably increase the productivity of the cashew plantations.

B.3. Expected project results aligned with the GCF investment criteria (max. 3 pages)

The GCF is directed to make a significant and ambitious contribution to the global efforts towards attaining the goals set by the international community to combat climate change, and promoting the paradigm shift towards low-emission and climate-resilient development pathways by limiting or reducing greenhouse gas emissions and adapting to the impacts of climate change.

Provide an estimate of the expected impacts aligned with the GCF investment criteria: impact potential, paradigm shift, sustainable development, needs of recipients, country ownership, and efficiency and effectiveness.

The main expected results are the: (i) rehabilitation of 38,000 hectares of old cashew plantations and support for the establishment of a new and modern orchard of cashew trees of 8,500 ha; (ii) the establishment of an employment program for 5,000 young people and women along the cashew value chain. As a result of the afore-mentioned activities by the
project, it is anticipated a significant carbon sequestration capacity of the planted area at 4, 4 MtCO₂ at the end of the project in 2023.

In accordance with the GCF’s environmental and social safeguards, the project is in conformity with the relevant national laws and regulations. In relation to climate change, PADEFA-ENA takes into account the main orientations contained in the policies and strategies developed in response to climate change and in compliance with international agreements ratified by Benin, namely the United Nations Convention on Climate Change, (UNFCCC), the Kyoto Protocol and the Paris Agreement. Policies and strategies include the National Action Plan to Combat Desertification, the Low Carbon and Climate Resilient Development Strategy, the First Nationally Determined Contribution (CDN) and the National Policy on climate change being adopted.

Ministère du Cadre de Vie et du Développement Durable (MCDVDD) is the focal Climate Change institution in the country and responsible for all climate change activities. One of its technical directorate (Directorate General for Environment and Climate–DGEC), is the country’s Accredited Entity. DGEC is responsible for developing and ensuring the implementation and monitoring/evaluation (M&E) of all national policy and strategies on the environment, managing the effects of climate change and promoting green economy and green growth in collaboration with other relevant structures in the country. The same is true of the Environment and Climate Fund (FNEC), which is responsible, among other things, for supporting programs and projects related to the protection of the environment and the improvement of the living environment of the population including the implementation, monitoring, and evaluation of projects and their impact on the environment. As part of their national mandates the DGEC and the National Committee on Climate Change (CNCC) will support the implementation of the project’s climate change-related activities.

B.4. Engagement among the NDA, AE, and/or other relevant stakeholders in the country (max ½ page)

Please describe how engagement among the NDA, AE and/or other relevant stakeholders in the country has taken place and what further engagement will be undertaken as the concept is developed into a funding proposal.

The Project has been widely consulted at all stages of its development. Indeed, the contacts established during the April 2017 identification mission continued during the preparation phase in January 2018, both in the project zone and in the capital city, Cotonou. Meetings were held with administrative authorities, local authorities, technical structures, professional agricultural organizations (OPA), women’s groups, private partners, ongoing projects and PTFs supporting the cashew nut sector in the country. This approach will continue and will be relayed in the field by the DDAEP PDA 4, which should serve as facilitating bodies, between all parties. Moreover, the implementation of the Project will require the establishment of mechanisms involving and closely empowering the various actors, in particular producers and the private sector (agricultural SMEs). The same approach will be pursued during the implementation of the Project and Bank’s supervision missions. The sustainability of the interventions undertaken, particularly with regard to productive capital (old plantations and new orchard of cashew trees), requires full ownership of the main players, hence the option of targeting in priority the most committed communities on the basis of selection criteria such as (land security, level of professional organization, etc.). During the evaluation mission, a presentation of the components, activities, and outputs of the Project was made during a participatory workshop that brought together all concerned parties.

C. Indicative Financing/Cost Information (max. 3 pages)

C.1. Financing by components (max ½ page)

Please provide an estimate of the total cost per component/output and disaggregate by source of financing.

<table>
<thead>
<tr>
<th>Component/Output</th>
<th>Indicative cost (USD x 1000)</th>
<th>GCF financing</th>
<th>Co-financing</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Amount (USD x 1000)</td>
<td>Financial Instrument</td>
</tr>
<tr>
<td>COMPONENT A: RESILIENCE OF CASHEW PRODUCERS AND INCREASE IN THE CARBON SEQUESTRATION POTENTIAL OF CASHEW NUT TREES</td>
<td>21,453.67 (73.4%)</td>
<td>8,900.81 GRANT</td>
<td>12,552.86 LOAN/GRA NT</td>
</tr>
<tr>
<td>COMPONENT B: SUSTAINABLE</td>
<td>5,883.76 (18%)</td>
<td>1,090.06 GRANT</td>
<td>4,793.70 LOAN/GRA NT</td>
</tr>
</tbody>
</table>
The GCF contribution is critical for the project in order to finance the operationalization and strengthening of the Government strategy for the development of the cashew nut sector (2016-2021). Vulnerability reduction may be sometimes easier to implement from a political point of view and social infrastructure investment usually justifies country’s indebtedness, but paradigm shift in policymaking may be more difficult to achieve.

Therefore, the grant will provide a strong incentive to go beyond the current national policy of reduction of vulnerability to climate change. The GCF Grant is expected to drastically speed-up the process and the set-up of a comprehensive framework for a change in paradigm shift in the cashew nut sector in Benin. The implementation of the GCF grant-funded target activities by the Directorate General for Environment and Climate Change (DGEC) will also be instrumental in increasing the institution’s legitimacy and comfort its position as the main policy maker on climate change at the national scale.

The allocation of resources from the tight national budget as well as from the bilateral and multilateral cooperation to finance the implementation of the agricultural sector has consistently indicated a low level of financing of the sector by the Government. For instance, between 2011 and 2015, while it was initially planned to invest FCFA 1,531.05 billion in the agricultural sector, only FCFA 742.31 billion was eventually invested by both the country and the private sector, i.e. a financial implementation rate of 48.5%. On average, over a 5-year period (2011-2015), the financing of the whole agriculture sector (including the crop, livestock, fisheries, forestry, rural roads and electrification, water supply for agricultural processing plants, agricultural credit and subsidies, etc.) represented only 6.5% of the total national expenditures, far below the 10% of the Maputo commitment. Over 2006-2011, the share of the national budget allocated to the entire agricultural sector in the country, including the cashew sub-sector, was 8.9%. It is noteworthy that over a period of five years, the share of the national budget devoted to agriculture in Benin declined by 2.4%. There is no indication for improvement in the near future.

Describe alternative funding options for the same activities being proposed in the Concept Note, including an analysis of the barriers for the potential beneficiaries to access to finance and the constraints of public and private sources of funding.

The financing of the agricultural sector in Benin is mainly provided by local microfinance institutions, decentralized financing structures and, to a lesser extent, commercial private banks. Since decentralized financing structures (MFIs) occupy only a very marginal position in the productive sector in Benin, the large majority of resource-limited producers are therefore nearly excluded from the financing mechanism. In addition, loans are mostly concentrated in the short term (80%), derisory on the medium (less than 20%) and almost non-existent in the long term. Apart from the cotton sector where repayments are more or less assured, banks are very reluctant to finance agricultural sectors, including the cashew production systems because of the perception of high risks associated with them. The lack of long and stable financial resources limits the ability of the financing institutions to offer medium-term credit opportunities, which is one of the main needs of agriculture. The interest rates charged by the majority of MFIs are very high at about 2% per month, i.e. an annual rate of 24%. The formalities of access to credits are often too restrictive for applicants. In addition, the period of implementation and the duration of the credits as well as repayment deadlines often do not adapt to production cycles in cashew nut plantations.
Justify the rationale and level of concessionality of the GCF financial instrument(s) as well as how this will be passed on to the end-users and beneficiaries. Justify why this is the minimum required to make the investment viable and most efficient considering the incremental cost or risk premium of the Project/Programme (refer to Decisions B.12/17; B.10/03; and B.09/04 for more details). The justification for grants and reimbursable grants is mandatory

The concessionality of the GCF funding, in the form of a grant of USD10 million will serve as a leverage of future investments in climate change mitigation in the cashew nut sector across the major vulnerable production zones in the country. However, the upfront investment costs needed to shift Benin, a least developed country (LDC), toward more climate resilient agriculture, and especially toward a more resilient cashew nut farming are a significant barrier for pursuing the green growth development pathway. Shifting to climate resilient and low carbon development pathways across the key agriculture sector in Benin requires additional substantive capital costs, which the scanty and dwindling national budget may not finance.

In order to be able to proceed with the investments required to adapt to climate change and pursue green development pathways, Benin has applied for a loan with the African Development Bank, but this source of finance alone may not be sufficient, and the country may not be able to bear the larger capital requirements. At the same time, the omnipresent poverty, especially in the project zone implies that farming communities do not have the means to invest in long-term solutions to climate threats. Instead, day-to-day survival compels them to deplete and degrade the natural resource base at a rate faster than it is being replenished. These families need short to medium term livelihood support if they are to adopt climate smart agriculture.

Currently, farmers are not able to make informed choices to optimise crop planning and varietal selection because they lack knowledge about climate resilient production systems and practices. At the community level there is also low awareness of climate change issues and a low capacity to adopt risk reduction and adaptation measures. Besides, for resource-limited cashew nut producers switching to different modes of management of their old and even new plantations and land for example, there is no adequate support for the first 5 years before there is a harvest, leading families to lose income for the period.

The GCF grant as well as the co-financing resources of the African Development Bank will lead to enhanced resilience to climate change impacts in the cashew nut production zones, particularly in the project zone prone, and will make adoption of longer-lasting contribution to delivering the country’s low carbon and climate resilient development strategy.

In the case of private sector proposal, concessional terms should be minimised and justified as per the Guiding principles applicable to the private sector operations (Decision B.05/07).

**C.3. Sustainability and replicability of the project (exit strategy) (max. 1 page)**

Please explain how the project/programme sustainability will be ensured in the long run and how this will be monitored, after the project/programme is implemented with support from the GCF and other sources.

In order to secure sustainability in the long run after the project elapses, strategic partners will be set up with recognized and experienced national structures for the implementation of project’s activities. Partnership agreements will thus be established with the relevant departments of the Ministries of Agriculture and Sustainable development (in charge of climate change) operating in the project intervention zone. The Project will build on the experience in partnerships gained from the ongoing Bank-funded projects in the country.

**Country ownership.** The project is fully owned by the Government of Benin and based on urgent needs assessment by actors of the sector. The project document has been shared with all executing entities, and more broadly with all stakeholders involved in the cashew nut sector in the country. During the implementation of the project, the discussions will continue within the steering committee of the project and all the target stakeholders. The valorization of the project outcomes is also of utmost importance as higher service quality and effective mitigation and adaptation to the expected impacts of droughts and flooding in the project’s zone will be a strong motivation for the Government of Benin to provide sufficient funding for the investment and operation in the sector.

**Sustainable financial resources.** Hard and soft infrastructures and hydro-meteorological services fall under government’s responsibility. Public agencies are usually in charge of service provision. As these services are non-commercial public services, subsidies are (and will remain) the main financing sources, both for investment and operation. The main issue is to clearly identify the recurring financial resources needs to comply with standard in service delivery and ensure that related resources are secured over the years.

**Capacity building.** Capacity building is a key aspect to address the issue of sustainability for the project’s outcomes. Most
executing agencies of the project will benefit from capacity building actions that will ensure that those entities internalize the processes initiated by the project.

For non-grant instruments, explain how the capital invested will be repaid and over what duration of time.

D. Supporting documents submitted (OPTIONAL)

☒ Map indicating the location of the project/programme
☐ Diagram of the theory of change
☐ Economic and financial model with key assumptions and potential stressed scenarios
☐ Pre-feasibility study
☐ Evaluation report of previous project
☐ Results of environmental and social risk screening

Self-awareness check boxes

Are you aware that the full Funding Proposal and Annexes will require these documents? Yes ☐ No ☐

• Feasibility Study
• Environmental and social impact assessment or environmental and social management framework
• Stakeholder consultations at national and project level implementation including with indigenous people if relevant
• Gender assessment and action plan
• Operations and maintenance plan if relevant
• Loan or grant operation manual as appropriate
• Co-financing commitment letters

Are you aware that a funding proposal from an accredited entity without a signed AMA will be reviewed but not sent to the Board for consideration? Yes ☒ No ☐
Figure 1: Map of the Project zone in Northern and Central Benin