

Concept Note

Enhancing livestock resilience to drought in Guinea Bissau

Banque Ouest Africaine de Développement (BOAD) | Guinea Bissau

27 February 2018



**GREEN
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FUND**

Concept Note

Project/Programme Title: Enhancing livestock resilience to drought in Guinea Bissau

Country(ies): Guinea Bissau

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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)			
A.1. Project or programme	<input checked="" type="checkbox"/> Project <input type="checkbox"/> Programme	A.2. Public or private sector	<input checked="" type="checkbox"/> Public sector <input type="checkbox"/> Private sector
A.3. Is the CN submitted in response to an RFP?	Yes <input type="checkbox"/> No <input type="checkbox"/> If yes, specify the RFP: _____	A.4. Confidentiality¹	<input type="checkbox"/> Confidential <input type="checkbox"/> Not confidential
A.5. Indicate the result areas for the project/programme	<p>Mitigation: Reduced emissions from:</p> <input type="checkbox"/> Energy access and power generation <input type="checkbox"/> Low emission transport <input type="checkbox"/> Buildings, cities and industries and appliances <input type="checkbox"/> Forestry and land use <p>Adaptation: Increased resilience of:</p> <input checked="" type="checkbox"/> Most vulnerable people and communities <input checked="" type="checkbox"/> Health and well-being, and food and water security <input type="checkbox"/> Infrastructure and built environment <input type="checkbox"/> Ecosystem and ecosystem services		
A.6. Estimated mitigation impact (tCO₂eq over lifespan)		A.7. Estimated adaptation impact (number of direct beneficiaries and % of population)	200 000
A.8. Indicative total project cost (GCF + co-finance)	Amount: USD 9 222 500	A.9. Indicative GCF funding requested	Amount: USD 9 222 500
A.10. Mark the type of financial instrument requested for the GCF funding	<input checked="" type="checkbox"/> Grant <input type="checkbox"/> Reimbursable grant <input type="checkbox"/> Guarantees <input type="checkbox"/> Equity <input type="checkbox"/> Subordinated loan <input type="checkbox"/> Senior Loan <input type="checkbox"/> Other: specify _____		
A.11. Estimated duration of project/ programme:	a) disbursement period: 3 ans b) repayment period, if applicable:	A.12. Estimated project/ Programme lifespan	This refers to the total period over which the investment is effective.
A.13. Is funding from the Project Preparation Facility requested?²	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Other support received <input type="checkbox"/> If so, by who: _____	A.14. ESS category³	<input type="checkbox"/> A or I-1 <input checked="" type="checkbox"/> B or I-2 <input type="checkbox"/> C or I-3
A.15. Is the CN aligned with your accreditation standard?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	A.16. Has the CN been shared with the NDA?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
A.17. AMA signed (if submitted by AE)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If no, specify the status of AMA negotiations and expected date of signing:	A.18. Is the CN included in the Entity Work Programme?	Yes <input type="checkbox"/> No <input type="checkbox"/>
A.19. Project/Programme rationale, objectives and approach of programme/project (max 100 words)	<p>Brief summary of the problem statement and climate rationale, objective and selected implementation approach, including the executing entity(ies) and other implementing partners.</p> <p>In Guinea Bissau, livestock is one of the main activities of rural populations. In a context of agricultural under-production, livestock can support food security and improve the living conditions of the population. However, this farming is the victim of the adverse effects of climate change with rising temperatures, a drop in rainfall, the intensification</p>		

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](#))

of drought, the early tarring of water points and a drop in fodder production. Conflicts over the management of natural resources are exacerbated between pastoralists and farmers, especially with no transhumance corridors. The project is initiated to strengthen livestock resilience to climate. It will be implemented by the departments in charge of livestock and the environment.

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.

In Guinea Bissau, the livestock sub-sector contributes more than 17% to the formation of GDP and employs more than 80% of the active population with the agricultural sub-sector. It is one of the main economic activities and support for food security for these people whose livelihoods are based on rainfed agriculture affected by climate change. The national livestock census in Guinea-Bissau conducted in 2009 indicated that the country has 1,121,555 cattle, 304,104 sheep and 646,183 goats. Although recent data are not available, the country's herd is growing rapidly. This livestock is mainly concentrated in the north and east of the country, particularly in Gabù, Bafatà and Oio regions, which are home to 86% of the livestock, of which 47% in Gabù, 20% and 19% in Bafatà 19%. Small ruminants (sheep and goats) follow roughly the same distribution as cattle. In order, they are found in Gabù (36.5%), Oio (24.7%) and Bafatà (18.4%). These three regions account for 79.6% of the national small ruminant.

Despite this potential, the livestock sub-sector remains vulnerable to the adverse effects of climate change. The constant decline in vegetation cover and land degradation due to extreme climatic effects such as drought are putting increasing pressure on renewable natural resources and pastures. As an indication, cultivated land area increased by 82.8% between 1970 and 2010, representing an annual growth rate of 4.38%. There is also a decrease in river flows of about 10% in the coastal zone and an average of 15% in the interior (north and east), between 1941 to 1969 and from 1970 (MRNE, 2004), while the livestock feed resource in Guinea Bissau is essentially based on pasture. In Guinea Bissau, 95% of the flows in the regions of Bafata, Gabù and Oio take place during six months, from June to November. With the early rains, increased temperatures, evaporation of surface water resources, access to water is increasingly difficult for farmers in December in May. This coupled situation of evapotranspiration and the fall in forage production leads livestock to destroy crops for food, thus accentuating conflicts between farmers and pastoralists. Transhumance has become an unavoidable response to feed and water livestock during the dry season, which tends to become longer.

During the transhumance period, stocking parents move with a large proportion of young people and children, preventing them from attending school. Despite the intensification of transhumance with climatic disturbances, and the social problems that accompany it, Guinea Bissau has not yet organized the sector to preserve livestock, agricultural production and forest resources. We note: (i) the absence of delimitation of the zones reserved for cattle routes; (ii) lack of empowerment of pastoralists in pasture management, through formal structures; (iii) the frequency of late wild bush fires with flora and fauna, caused by pastoralists to renew pasture; (iv) the absence of consultation and conflict prevention frameworks bringing together the different categories of actors at local level. At the national level, however, there is a market for livestock products. As an indication, in 2007, 257 000 tonnes of beef were imported against a national production of 1 334 tonnes. In these conditions, and with respect to climate variability, strengthening the resilience of livestock in Guinea Bissau is important. Youth employment could be addressed in the livestock sector, if it is well organized. The promotion of this project will not only help to organize transhumance, but also to install unemployed youth for sustainable breeding in Guinea Bissau.

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.

The project is part of the Livestock Development Policy Letter, which aims to make livestock production more competitive, generating quality animal products on a sustainable basis, contributing significantly to the country's food improvement of the living conditions of the pastoral populations and the reduction of poverty. The project, including the establishment of grazing pastures for transhumance, the stabilization of pastoralists through the development of grazing and the implementation of local water infrastructures, contributes to the achievement of the objectives of the NDC which aims, among others, strengthening the protection of forest resources, promoting renewable energies, improving access to water for livestock.

The project is consistent with NAPA which identifies livestock promotion as one of the adaptation options to support food security. The project is also consistent with National Second Communication on Climate Change (NSC); PRSP I and II, NAPA, National Action Plan to Combat Drought and Desertification (NAP / CDD) and TERRA RANKA which is a major concern for the country.

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

The lack of water for livestock watering: Despite the importance of the watershed network of Guinea Bissau, Gabi, Oio and Bafatà project intervention regions suffer from a lack of water for watering livestock. With climate change, the only rainy season is getting shorter, giving way to a long dry season. Rising temperatures have amplified evaporation of surface water with early drying of water points making it difficult to water livestock.

Lack of forage: land degradation due to poor agricultural practices and livestock, amplified by the adverse effects of climate change, prolonged dry season, intensification of evapotranspiration and evaporation have negative impacts on the forage production. Feeding livestock is precarious especially in the dry season. This accentuates the phenomenon of transhumance, conflicts between farmers and producers, bushfire practices by farmers for the regeneration of fodder, etc.

Absence of pastoral routes: Pastoral rangelands are not well defined in the project area. This accentuates the conflicts between breeders and farmers in the occupation of spaces and in the management of natural resources.

Low financial capacity: There is a weak financial capacity of the State and populations to finance livestock resilience activities in the face of climate change. Generally poor people do not have financial resources.

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.

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.

This project is initiated to strengthen livestock resilience to drought in Guinea Bissau. It is in line with the priorities of the Nationally Determined Contribution (NDC) and the Livestock Development Policy Letter, which aims to ensure food security and poverty reduction at the rural level through increased and the diversification of animal productions. The project has the specific objectives of :

- Restructure the transhumance practice and strengthen the technical and organizational capacities and define the pastoral routes and transhumance corridors, along which will be installed hydraulic infrastructure (water reservoirs and human-powered drilling).
- stabilize families of pastoralists, particularly young people, through grazing development and the installation of local hydraulic infrastructures, in particular: (i) human-powered boreholes; (li) reservoirs dual purpose livestock-farming;
- Share knowledge, disseminate lessons learned and replicate the project.

To achieve these objectives, the project was structured in four components :

Component 1: Restructuring the practice of transhumance, strengthening the technical and organizational capacities of stakeholders

This component comprises two sub-components: (i) Strengthening the regulatory framework for pasture management and transhumance; (ii) Establishment of pastoral routes for transhumance.

Sub-Component 1.1 : Strengthening the regulatory framework for pasture management and transhumance

- Revision and strengthening of the regulatory framework of the livestock sub-sector;
- Identification of the concentration zones of pastoralists and organization of exchange workshops for the definition of rangelands;
- Strengthening the technical organizational capacities of public and private actors in the livestock sub-sector and the organizational capacities of livestock farmers

Sub-Component 1.2: Establishment of pastoral routes for transhumance. This sub-component aims to improve the practice of transhumance source of several conflicts between farmers and breeders. The planned activities are:

- Organization of national workshops for the definition of rangelands. These workshops will bring together all the

actors involved in the sectors of agriculture, livestock, water, forestry including biodiversity, land management, etc.

- Organization of campaigns to raise the awareness of pastoralists on the respect of pastoral routes;
- Definition and marking of pastoral routes;
- Development of 100 water reservoirs and 50 human-powered boreholes along pastoral rangelands for livestock watering;
- Monitoring of pastoralists for the use of rangelands.

Component 2: Stabilization of pastoralists through pasture development and the establishment of local water infrastructures

This component aims to stabilize at least 20% of pastoralist families. It has two sub-components: (i) Support to improve access to water for livestock through the construction of hydraulic infrastructures; (ii) Development of grazing and support for the valorization of livestock products.

Subcomponent 2.1. Support to improve access to water for livestock through the realization of hydraulic infrastructure. The planned activities are :

- Development of 100 water reservoirs with a dual function of breeding and agriculture. This activity will enable farmers to develop irrigation downstream of the reservoirs to improve their agricultural production. Fields and oxen owned by the same owners will further protect crops and limit conflicts between herders and farmers. This to encourage the stabilization of breeders;
- Realization of drilling with human motility to serve the supply of drinking water for the population and used for livestock watering. Pastoral drilling will be conducted near developed pastures to ensure a permanent supply of water for livestock. A total of 100 boreholes will be completed ;

Subcomponent 2.2. Development of grazing and support for the valorization of livestock products: The activities planned under this sub-component are :

- Identification of grazing areas and support for the installation of 100 families of young farmers for the development of brachiaria fields (fodder plant) on an area of 5,000 hectares with an average yield of 3t / ha ;
- Support to the production and distribution of brachiaria seeds to beneficiaries who will then be responsible for its expansion in their own areas under the supervision of the National Institute of Agrarian Research;
- Valorization of animal waste in organic manure for the improvement of soil quality and agricultural production. At least 50 groups / cooperatives in the production of organic fertilizer from livestock excrement ;
- Support to 50 groups of women and young people in the demonstration of milk processing. This will involve setting up of small milk processing units.

Component 3: Sharing knowledge and disseminating lessons learned

- Dissemination of good practices and lessons learned from the project;
- Sharing knowledge and replication of the project.

To these three main components is added component 4: Project Management

It will set up a Project Management Unit (PMU). This unit will be composed of a project coordinator, a livestock expert, a hydraulic engineer, an accountant, a specialist in procurement, a secretary.

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.

The project seeks to promote livestock breeding resilient to the adverse effects of climate change. It can promote a change in livestock practices that has negative impacts on the environment. In this way, the project will encourage the adoption of livestock farming practices that are not only resilient, but also allow sustainable management of natural resources and reduce conflicts between farmers and pastoralists. The project aims to promote the development and management of pastoral areas by the breeders themselves. This will enable them to better valorize livestock products, a number of which will be used in soil restoration. To this end, the project intends to provide support in setting up incentive regulations in Guinea Bissau.

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

The actions to be undertaken will comply with the regulatory texts governing the management of the environment (Framework Law on the Environment and environmental and social impact assessment procedures). Project activities will comply with national and international standards, as appropriate, for the construction of water mobilization, grazing

management, environmental management and pastoral rangeland infrastructure.

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 accredited entity that will carry the project is the West African Development Bank (WADB). This Bank has experience in financing and managing livestock projects. The activities developed in this project are in line with WADB's areas of intervention: climate change, rural development (agriculture and livestock, water, etc.). The project will be implemented by the Ministries in charge of environment and livestock and all the actors who will be identified during the preparation of the Full proposal.

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

Project risks are presented below.

Risk Categories	Risk	Level	Mitigation measures
Policy	Deterioration of political conditions	Medium	Although Guinea Bissau has experienced political instability in previous years, the political climate has improved in recent years. The Government encourages the arrival of projects of socio-economic development and protection of the environment. In addition, the preparation and implementation of the project will be ensured or coordinated by technical staff of the ministries involved in the project to limit political interference.
Operational	Low participation and involvement of deconcentrated public services	Low	Focal points formed by representatives of deconcentrated public services will be appointed to coordinate fieldwork and facilitate access to information
	Lack of support from local administrative authorities (Governors and Sector Administrators)	Low	The local administrative authorities have already worked with the firm on projects including the Adaptation Fund project on climate-smart agriculture in Guinea Bissau. The said authorities showed their interest and were strongly involved in the preparation of the projects. This project has been the subject of strong demand expressed by these authorities and grassroots communities.
	Failure to coordinate activities due to conflicts of interest between stakeholders including public institutions	Low	A project studies coordination team is set up to coordinate project preparation activities. This team will work in collaboration with the structures involved in the project.
	Reluctance in stabilizing pastoralists who have become accustomed in recent years to transhumance	Medium	The project included a program to sensitize farmers to the benefits of stabilizing livestock. The project has also planned out-of-season farming activities to enable farmers to improve their living conditions.

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.

The project focuses on adaptation and aligns with the following GCF focal areas: (i) increase resilience and livelihood of the most vulnerable people, communities and regions and (ii) increase resilience of health, food and water security. The

project, if implemented, will: (i) enhance the resilience of livestock to drought; (ii) generate quality livestock products on a sustainable basis; (iii) contribute significantly to the country's food security; (iv) improve the living conditions of pastoral populations, improve employment and reducing poverty.

The table below provides a summary of project alignment with GCF investments criteria.

		<i>Project</i>
GCF impacts and core indicators	Area (ha) of pasture developed	5 000
	Quantity of feed available per year (tonnes)	15 000
	Number of oxen concerned	TDB
	Direct beneficiaries	1000 breeders families
	Indirect beneficiaries	TBD
	Percent of target population aware of the potential impacts of climate change and range of possible responses	TBD
Other relevant indicators	Expected strengthening of adaptive capacity and reduced exposure to climate risks	At least 50,000 people will be affected by capacity building and awareness activities
	Potential for scaling-up and replication	The project, through its innovation in the sub-sector of hydro-agricultural development, has significant potential for replication. The project can be replicated 5 times to cover a large number of areas.

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.

1. Climate impact potential

The project will have a climatic impact in that it allows better management of forest resources through the delimitation of transhumance corridors and the development of pasture areas. The project targets three regions that are home to 86% of the Guinea Bissau cattle herd. Studies show that at least 50% of the population practices breeding in these areas. The number of direct and indirect beneficiaries is estimated at around 200 000.

2. Paradigm shift potential

The implementation of the project will encourage people to practice climate-resilient livestock farming that best protects natural resources. The project has included in Component 1 a capacity building and dissemination of lessons learned activities. Capacity building activities concern all the actors involved in the project (government services, private operators, farmers' organizations, etc.). These activities will enable the actors to assimilate the practices promoted in the project. Knowledge sharing and learning will be based on a project knowledge management strategy, with communication activities tailored to target groups. Lessons learned materials will be produced and annual experience-sharing meetings will be held. These actions will have to reach a larger number of people.

Capacity-building of services, especially animal health services and capacity building of pastoralist groups in the production of dry fodder to cope with drought and the construction of water points will create an environment favorable to development of the livestock sub-sector. The project will revise the regulatory framework of the livestock sub-sector to address issues of climate change adaptation, coordinated management across different sectors to make livestock production more competitive and sustainable.

3. Sustainable development potential

Economic co-benefits: Le projet est porteur d'emplois directs et indirects. Il s'agit d'emplois non rémunérés et des emplois rémunérés. La production du fourrage, la réalisation des ouvrages hydrauliques et surtout le développement des activités de valorisation des produits d'élevage sont pourvoyeurs d'emplois pour les jeunes, les femmes et les hommes. Au moins 20 000 hommes, femmes et jeunes seront concernés. Le projet, s'il est mis en œuvre, permettra la Guinée Bissau de produire des bovins qui seront vendus sur le marché extérieur notamment dans les pays voisins. Ce qui améliorera la balance commerciale du pays.

Social co-benefits: La transhumance mobilise les jeunes, enfants et adultes durant toute la saison sèche à la recherche du pâturage. Ce phénomène limite la scolarisation des jeunes et enfant qui est appelé à partir en brousses pour une durée de 6 mois en moyenne. La stabilisation des éleveurs (20% comme cible) permettra donc d'améliorer le taux d'éducation. L'amélioration des revenus due à l'amélioration de la production agricole et d'élevage permettra d'améliorer l'accès à l'éducation. Les produits d'élevage et leurs dérivés (viande, lait, fromage, etc.) entrent dans

l'alimentation de la population Bissau-guinéenne et l'amélioration de leur production aura un effet bénéfique sur la santé des bénéficiaires.

Environmental co-benefits: Les activités de la composante 2 sont consacrées à l'amélioration du pâturage avec des espèces légumineuses fixatrices d'azote et amélioratrice du sol. Ces activités limiteront la transhumance qui est source de conflits et d'impact négatifs sur l'environnement le long des parcours de transhumance. Ces activités permettront d'améliorer le microclimat dans les zones d'intervention du projet. Il est prévu dans le cadre du projet de renforcer la réglementation relative au sous-secteur de l'élevage pour promouvoir des activités durables d'élevage et portant moins d'impacts sur l'environnement. Le projet en stabilisant les groupes d'éleveurs permettra également de préserver les cultures.

Gender-sensitive development impact: Dans le cadre du projet, l'aspect genre sera pris en compte. Des analyses sur le genre seront conduites. Toutefois, il faut relever déjà que l'appui à la valorisation des produits d'élevage sera particulièrement bénéfique aux femmes et aux jeunes. Il s'agit des activités de transformation du lait en produits laitiers et de leur commercialisation, de la valorisation des excréments de bétail en biogaz et en engrais organiques.

4. Needs of recipient

Vulnerability to climate change depends on exposure of social systems or natural systems to climatic events, their sensitivity to the (expected) impacts, and their capacity to respond and recuperate after an impact has occurred. These three dimensions – exposure, sensitivity and adaptive capacity – are formed not only by the magnitude and frequency of current or future climatic variability, but also a variety of factors that affect human systems, such as water access, infrastructure, political stability, market access, prices, availability health services etc⁴.

In this context, Guinea-Bissau's National Adaptation Programme of Action (NAPA) (Republic of Guinea-Bissau, 2006) identified the agrarian sector (including livestock) as the most vulnerable to climate change for a number of reasons: it is the dominant component of the GDP, the livelihood for a majority of the poor population depends on agrarian sector, with climatic change potentially causing significant damage to the sector. With decreases experienced in the duration of the rainy season (now limited to 5 months) and the overall volume of rain having led to a decline in production often associated with water shortage, acute droughts are identified as the most significant risk. A reduction in the duration of cold periods may exacerbate heat stress on plants and animals (livestock).

Several climate models conducted at the national level generally predict a darkened future for the country⁵. These models, developed through the NCCCC and NAPA processes, suggest increased climate variability and climate-change-related shifts in temperature and rainfall in the future in Guinea-Bissau both in the short and long term.

Regarding temperatures, in the short term, ie by 2020, changes are already expected. Data from the country's Second National Communication on Climate Change (SNCCC)⁶ reports that both high and low emissions scenarios for climate models downscaled to Guinea-Bissau predict the average temperature to increase by about 1.0°C to 2020 under the different IPCC scenarios in relation to the average temperatures established for the period 1960-1991. All models predict year increase in national average temperatures of between 1.8 ° C and 3.3 ° C for the lowest and highest emission scenarios respectively, relative to 1961-1990 figures.

Regarding rainfall, in by 2020, impacts on rainfall are more uncertain: most of the models expect precipitation to increase across the nation by 3.7-3.8% under future emissions scenarios, although one model shows a decrease in average annual precipitation by 2% (CSIRO). However, all the scenarios forecast irregularity in rainfall patterns implying challenges to existing agricultural practice. At the long term, by 2050, most global and regional models predict that the average of the annual rainfall in West Africa will increase by 3.8 - 4.1% in relation to 1961-1990 levels, with the notable exception of the CSIRO model, which predicts up to 3.5% decrease in rainfall. It is important to note the observed precipitation patterns to date have shown a decline in precipitation, whilst most of these models show an increase in precipitation (except for the CSIRO model).

Water resources of Guinea Bissau remain vulnerable to the effects of climate change. Data's indicate that the rivers will experience a rate reduction exceeding 50% of the current average in places. This phenomenon of reduction will be common to all parts of the country but very marked for those on the 10th parallel north, which includes upstream of the Niger watershed. It is therefore anticipated that from 2050 to 2100, the rate of decline the Niger watershed in Guinea

⁴ UNFCCC, 2010

⁵ These models are ECHAM4, HADCM3, NCAR_PCM, CGCM2, GFDL-R30

⁶ The country's third National Communication on Climate Change is currently in preparation.

Bissau from 16 to 28% to the sensitivity of 2.5 ° C and 23-54% sensitivity 4.5 °C. The affection of water resources will limit access to livestock to this resource. If concrete activities are not implemented the situation of the populations and especially the breeders will continue to deteriorate.

5. Country ownership

The project is consistent with the Nationally Determined Contribution (NDC) which recommends improving the country's coping capacity in the livestock sector by improving access to drinking water for livestock. It is also consistent with the Livestock Development Policy Letter, which aims to make livestock production more competitive, generating quality animal products on a sustainable basis, contributing significantly to the country's food security, and improving living conditions of the pastoral populations and the reduction of poverty. The project will be implemented by the Ministry of Agriculture and Livestock through the General Directorate of Livestock. The project has been identified with stakeholders involved in the agriculture and livestock sector. Through other projects, particularly in the Agriculture sector, the populations expressed their needs in support of the resilience of livestock in the face of drought (lack of fodder and water) and in the improvement of breeding practices to reduce resource management conflicts between herders and farmers.

6. Efficiency and effectiveness:

The project has potential cost-effectiveness. The analyses will be conducted during the preparation of the project.

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 was identified in collaboration with the NDA of the Green Climate Fund of Guinea Bissau, the Ministry in charge of Livestock sector, the BOAD (accredited entity). An identification and consultation mission was conducted in Guinea Bissau by Global Lead in the framework of the Concept Note preparation. The project benefited from the endorsement of the NDA of the Green Climate Fund of Guinea Bissau.

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.

Component/Output	Indicative cost (USD)	GCF financing		Co-financing		
		Amount (USD)	Financial Instrument	Amount (USD)	Financial Instrument	Name of Institutions
Component 1: Restructuring of the transhumance practice, strengthening the technical and organizational capacities of the actors	2 500 000	2 500 000	Grant			
Component 2: Stabilization of pastoralists through pasture development and the establishment of local water infrastructures	5 000 000	5 000 000	Grant			
Component 3: Sharing knowledge and disseminating lessons learned	1 000 000	1 000 000	Grant			
Project activities cost	8 500 000	8 500 000	Grant			
Project management	722 500	722 500	Grant			

(8.5%)					
Indicative total cost (USD)	9 222 500	9 222 500			

For private sector proposal, provide an overview (diagram) of the proposed financing structure.

C.2. Justification of GCF funding request (max. 1 page)

Explain why the Project/ Programme requires GCF funding, i.e. explaining why this is not financed by the public and/ or private sector(s) of the country.

Guinea Bissau has developed its Nationally Determined Contribution (NDC) which recommends improving the country's adaptive capacity by reducing pressure on forest and fisheries resources and improving access to drinking water for consumption and livestock for the promotion of food security in rural areas. However, the financial limitations that the country faces constitute a major constraint in the implementation of adaptation actions in this sector. The isolated efforts undertaken so far at the level of the Government as well as at the level of the communities have shown their limits in the face of the scale of the phenomenon. Without external resource mobilization, the situation will continue to deteriorate further. The GCF is therefore asked to provide financial support for the implementation of this project.

The project addresses sensitive areas of interest to the GCF, such as: (i) Resilience of People and Communities; (ii) Food and Water Security; (iii) Energy Access and Power Generation and (iv) Forestry and land use. In addition, the project is aligned with two of the five cross-cutting investment priorities with strong mitigation and adaptation impacts: (i) promoting low-carbon and climate-resilient agriculture; and (ii) transforming production and access to energy.

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.

Funds requested for the financing of project activities could be requested from the State or national banks. However, the Bissau Guinea government does not have sufficient financial resources and the local capital market is precarious. The bond and stock markets are non-existent. Lack of financial instruments makes it difficult to mobilize financial resources at the national level. It should be noted that there is very little private sector interest in investing in Guinea Bissau. The private sector investors perceive Guinea Bissau as too risky for investment in projects including livestock resilience project. In the WB/IFC Doing Business 2017 data, Guinea-Bissau is 176th out of 190 economies on protecting investors⁷.

The lack of financial support and the lack of an incentive framework prevent this sector from playing its full role. Without external financial mobilization, the livestock sector will become increasingly vulnerable to the adverse effects of climate change with increased evaporation, early depletion of water points, reduced forage production, etc.

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.

Guinea Bissau is one of the Low Developed Countries (LDCs). The country is heavily indebted. These debts represent 42.1% of GDP⁸ in 2018. These debts have been restructured with the HIPC Initiative. This requires the country to receive authorizations from the International Monetary Fund (IMF) to incur new debts. But the IMF does not allow the country to take high-rate loans even if they are concessional. The IMF prefers grants for the country. This limits Guinea Bissau in its development and particularly in its initiatives to fight against climate change. With regard to climate-related projects, and given the urgency of the needs on the ground, traditional donors in Guinea Bissau are trying to find donations to finance these projects or, at least, to improve the loans they give to the country. The request for a grant to the GCF to finance this project is a must necessity if the country wants to carry out the project.

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

⁷ See <http://www.doingbusiness.org/data/exploreeconomies/guinea-bissau>

⁸ FMI - World Economic Outlook Database - <http://www.expert-comptable-international.info/fr/pays/>

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.

Project activities have been planned to sustainably strengthen the resilience of livestock to the adverse effects of climate change. The sustainability of the project lies in strengthening the capacities of the various actors, particularly the farmers and the decentralized technical services in charge of livestock, the environment, water, etc. The sustainability of the project also lies in strengthening the policy and regulatory framework to restructure the livestock sector with incentives for adopting climate resilient practices and practices. The project involves all stakeholders involved in the livestock, environment, water and agriculture sectors. This coordinated and participative management will ensure the sustainability of project actions. In addition, the project plans to gradually settle livestock breeders by promoting a combinatorial strategy for the development of dry fodder for livestock feed during the dry season and the development of off-season crops to improve the living conditions of pastoralists. Knowledge sharing and lessons learned activities will further encourage the adoption of resilient technologies and contribute to the sustainability of the project. After the end of the project, pastoralists with experience will continue to develop pasture fields. Supervisory activities for pastoralists will continue to be provided by regional livestock management officers, whose capacities are reinforced in the framework of the project.

The project has significant potential for its realization. The long-term vision of Guinea Bissau is to promote resilient and semi-extensive livestock breeding on all livestock in order to best preserve natural resources and protect forests. In the CDN, Guinea Bissau plans to increase the protection of these forest areas (protected areas) from 15% to 26% and ensure its management. This project plans to stabilize 20% of breeders in the intervention zone. The objective in the sub-sector is to stabilize a high number of farmers. This project can therefore be replicated in the same intervention regions and in other regions of Guinea Bissau where the number of livestock is important.

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