

Funding Proposal

SAP012: Inclusive Green Financing for Climate Resilient and Low Emission Smallholder Agriculture

Niger | International Fund for Agricultural Development (IFAD) | Decision
B.24/09

4 December 2019



Simplified Approval Process Funding Proposal

Project/Programme title: **Inclusive Green Financing for Climate Resilient and Low Emission Smallholder Agriculture**

Country(ies): **Niger**

National Designated Authority(ies): **Dr. Kamaye Maâzou, Executive Secretary, National Council for Environment and Sustainable Development (CNEEDD)**

Accredited Entity: **International Fund for Agricultural Development (IFAD)**

Date of first submission: 15/03/2019

Date of current submission/
version number: 22/10/2019

If available, indicate GCF code: *This code is assigned to each project upon first submission of a Concept Note or Funding Proposal and remains the same throughout the proposal review process. If you have submitted this project/programme previously please indicate the GCF code here.*



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This section focuses on describing the context of the project/programme, providing details of the project/programme including components, outputs and activities, and implementation arrangements.

Section C **FINANCING INFORMATION**

This section explains the financial instrument(s) and amount of funding requested from the GCF as well as co-financing leveraged for the project/programme. It also includes justification for requesting GCF funding and exit strategy.

Section D **LOGIC FRAMEWORK, AND MONITORING, REPORTING AND EVALUATION**

This section includes the logic framework for the project/programme in accordance with the GCF Results Management Framework and Performance Measurement Framework, and gives an overview of the monitoring, reporting and evaluation arrangements for the proposed project/programme.

Section E **EXPECTED PERFORMANCE AGAINST INVESTMENT CRITERIA**

This section provides an overview of the expected alignment of the projects/programme with the GCF investment criteria: impact potential, paradigm shift, sustainable development, needs of recipients, country ownership, and efficiency and effectiveness.

Section F **ANNEXES**

This section provides a list of mandatory documents that should be submitted with the funding proposal as well as optional documents and references as deemed necessary to supplement the information provided in the funding proposal.

Note to accredited entities on the use of the SAP funding proposal template

- The Simplified Approval Process Pilot Scheme (SAP) supports projects and programmes with a GCF contribution of up to USD 10 million with minimal to no environmental and social risks. Projects and programmes are eligible for SAP if they are ready for scaling up and have the potential for transformation, promoting a paradigm shift to low-emission and climate-resilient development.
- This template is for the SAP funding proposals and is different from the funding proposal template under the standard project and programme cycle. Distinctive features of the SAP funding proposal template are:
 - *Simpler documents*: key documents have been simplified, and presented in a single, up-front list;
 - *Fewer pages*: A shorter form with significantly fewer pages. The total length of funding proposals should **not exceed 20 pages**;
 - *Easier form-filling*: fewer questions and clearer guidance allows more concise and succinct responses for each sub-section, avoiding duplication of information.
- Accredited entities can either directly incorporate information into this proposal, or provide summary information in the proposal with cross-reference to other funding proposal documents such as project appraisal document, pre-feasibility studies, term sheet, legal due diligence report, etc.
- Submitted SAP Pilot Scheme funding proposals will be disclosed simultaneously with submission to the Board, subject to the redaction of any information which may not be disclosed pursuant to the GCF Information Disclosure Policy.

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Please use the following name convention for the file name:

“SAP-FP-[International Fund For Agricultural Development]-[190515]”

| A. PROJECT/PROGRAMME SUMMARY | | | |
|--|--|---|--|
| A.1. Has this FP been submitted as a SAP CN before? | | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | |
| A.2. Is the Environmental and Social Safeguards Category C or I-3? | | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | |
| A.3. Project or programme | <i>Indicate whether this FP refers to a combination of several projects (programme) or one project.</i> <input checked="" type="checkbox"/> Project <input type="checkbox"/> Programme | A.4. Public or private sector | <input checked="" type="checkbox"/> Public sector <input type="checkbox"/> Private sector |
| A.5. Result area(s) | <i>Indicate the result areas for the project/programme.</i> <u>Mitigation:</u> Reduced emissions from: <input checked="" type="checkbox"/> Energy access and power generation <input type="checkbox"/> Low emission transport <input type="checkbox"/> Buildings, cities and industries and appliances <input checked="" type="checkbox"/> Forestry and land use <u>Adaptation:</u> Increased resilience of: <input checked="" type="checkbox"/> Most vulnerable people and communities, including women and girls <input checked="" type="checkbox"/> Health and well-being, and food and water security <input type="checkbox"/> Infrastructure and built environment <input checked="" type="checkbox"/> Ecosystem and ecosystem services | | |
| A.6. Total investment (GCF + co-finance) | 11.475 (million Euros) | A.7. Total GCF funding requested | 8.5 (million Euros) |
| A.8. Type of financial instrument requested for the GCF funding | <i>Mark all that apply.</i> <input checked="" type="checkbox"/> Grant <input checked="" type="checkbox"/> Loan ¹ <input type="checkbox"/> Equity <input type="checkbox"/> Guarantees <input type="checkbox"/> Others: | | |
| A.9. Division of GCF funding by thematic funding window (if applicable) | _____ USD or __50%__ % Mitigation (4,25 million Euros) _____ USD or __50%__ % Adaptation (4,25 million Euros) <i>In case of cross-cutting project/programme, indicate the allocation of funding according to mitigation or adaptation activities. The sum of mitigation and adaptation should add to the amount indicated in field A.7.</i> | | |
| A.10. Implementation period | 5 years 01/02/2020 to 31/12/2024 | | |
| A.11. Total project/programme lifespan | 20 years | A.12. Expected date of internal approval | 10/15/2019 |
| A.13. Executing Entity information | The Republic of Niger (RoN) through its Ministry of Finance | | |
| A.14. Scalability and potential for transformation (Eligibility for SAP, max. 50 words) | | | |
| 1. Access to credit has a significant role to play in increasing farm productivity but remains a key constraint for smallholder farmers, farmers' organizations, cooperatives and micro, small and medium-sized enterprises (MSMEs) in Niger. Inclusive green financing for climate resilient and low emission smallholder agriculture is the first Green Climate Fund (GCF) lending project to be implemented at scale in Niger. Building on the International Fund for Agricultural Development's (IFAD) lessons learnt and its partners' experiences in the country, this project's main | | | |

¹ Senior loans and subordinated loans.

objective is to support the building and scaling up of the resilience and adaptive capacity of rural communities and farmers' organizations. These organizations include youth and women's organizations, cooperatives and MSMEs. The focus will be on building the resilience of their agricultural and water resource management practices to current and future climate risks in four critical agro-ecological zones: Zinder, Maradi, Dosso and Tahoua. It will further contribute to reducing greenhouse gas emissions from energy use within agricultural value chains through water mobilization, processing, packaging etc. and the promotion of renewable energy technologies (RETs). The project will achieve these objectives by removing key barriers to accessing financial and non-financial services that support farmers in adopting and implementing climate change adaptation and mitigation best practices and solutions. This GCF project will build upon synergies with the active IFAD portfolio in Niger to reinforce its goal of reduce the impact of climate change on the food security of smallholder farmers and pastoralists through inclusive green financing (particularly for women and youth) in Niger. The project will directly target 25,000 smallholder farmers and approximately 150,000 indirect beneficiaries already targeted by the new IFAD investment in Niger.

A.15. Project/Programme rationale, objectives and approach (max. 250 words)

2. Niger is the world's poorest country. It ranked 189th out of 189 countries on the Human Development Index in 2017. Its poverty rate was estimated at 44.1% and the average income per capita at USD 420 in 2018. Agriculture is the most important sector of Niger's economy (accounting for 43.4 % of gross domestic product in 2018) and the main source of livelihood for rural communities, where 85% of employment depends on rainfed agriculture, livestock, fishing and forestry. The major crops produced can be grouped into two categories: rainy season and dry season. Rainy season crops include millet, sorghum, cowpea, groundnut, maize, chufa (*Cyperus esculentus*), rice, sesame, Bambara groundnut and common sorrel (a leafy vegetable). Dry season crops are grown on irrigated land (sweet potato, Irish potato and some rice species) or market gardening (onion, tomatoes, sweet pepper, squash, melon, carrot, eggplant, okra, lettuce, etc.). In some parts of the country, there is a possibility of expanding production beyond the rainy season (June – September) by adopting better water resource management practices and innovative irrigation techniques that use solar energy. Major agricultural exports include onions and live animals, but also cotton, peanuts, cassava, legumes and high-quality rice. Niger also imports cereals, such as broken rice, which is a preferred staple when droughts reduce local production as it helps to meet deficits in the production of staple foods. Niger is, in fact, land-rich and water-poor.
3. Three quarters of Niger's land area is desert and agriculture is mainly concentrated in the southern part of the country. The high sensitivity of the agricultural sector to increasing climate change and climate variability combined with high poverty rates are the main sources of Niger's vulnerability to food insecurity and malnutrition. Climate risks and weather-related factors will increasingly have negative impacts on agricultural production. Climate projections indicate historical increases in temperature ($>+2^{\circ}\text{C}$ 1980-2010²) and variations in precipitation with early dry seasons and shorter rainy seasons (July-September). Niger's rural people have a long history of confronting serious crises, including droughts, locusts, and famine, with limited capacity to adapt. In the last century, rainfall has fluctuated dramatically from the mean. Agricultural productivity and economic growth continue to be hindered by many factors including aridity (compounded by climate fluctuations), unstable commodity prices, policy and institutional constraints, government capacity to deal with climate shocks and low levels of investment in infrastructure. While there are signs that significant improvements on climate adaptation have been made in recent years, many thanks to IFAD interventions, large segments of the rural population are still vulnerable to disaster and for many, their resilience is declining (e.g. Zorom et al. 2013; McKune and Silva 2013)

² <http://www.agrhymet.ne/eng/bulletin.html>

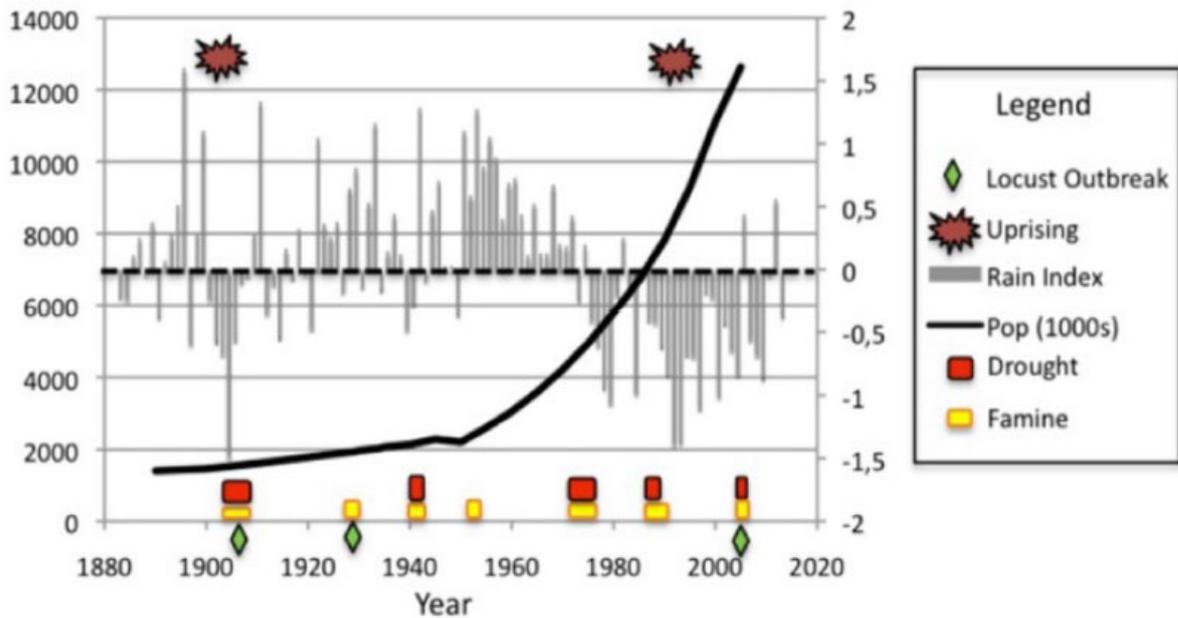


Figure 1: correlation of rainfall levels to drought occurrence in accordance with social factors.
Source : Sendzimeer and al. 2011

4. Precipitation will continue to decrease, as temperatures are expected to increase by between 1 and 1.72°C for 2031-2050 compared to the reference period 1986-2005 (source climate analytics, 2019). Under such climate scenarios, agricultural production is expected to drop by at least 20%, which will reduce food availability and economic returns from agricultural products. Using the IFAD Climate Adaptation in Rural Development – Assessment Tool (CARD)³, climate models indicate that millet production is predicted to decrease by 5.87%, groundnut by 10.39% and rice by 7.82% over the next 20 years at the national level. This is of particular importance in the Maradi, Zinder, Tahoua and Dosso regions where late and erratic rainfalls and the higher frequency and longevity of dry spells have been observed. Projections based on the emission scenario RCP4.5 predict a decrease in rainfall of up to 20 mm per year for 2031-2050, with delayed and shorter rainy seasons compared to an average of 120 mm registered during the period 1986-2005. The targeted regions will be affected differently (see feasibility study in annex): a 20 mm decrease for Maradi and a 10 mm decrease for Zinder, Tahoua and Dosso. As more than 70% of rural communities depend directly on rainfed agriculture (farming, livestock, fishery and forestry), they are more vulnerable to climate risks such as drought, delayed rainy seasons and short rainfall. The negative impacts are exacerbated when smallholders have low adaptive capacity and limited financial resources to withstand these climate change impacts.

³ The Climate Adaptation in Rural Development – Assessment Tool (CARD) is a platform that helps explore the effects of climate change on the yield of major crops. It is intended to support the quantitative integration of climate-related risks in agricultural and rural development investments and strategies, including economic and financial analyses (EFA). Various climate models are included in the tool for 17 major crops in nearly all African countries.

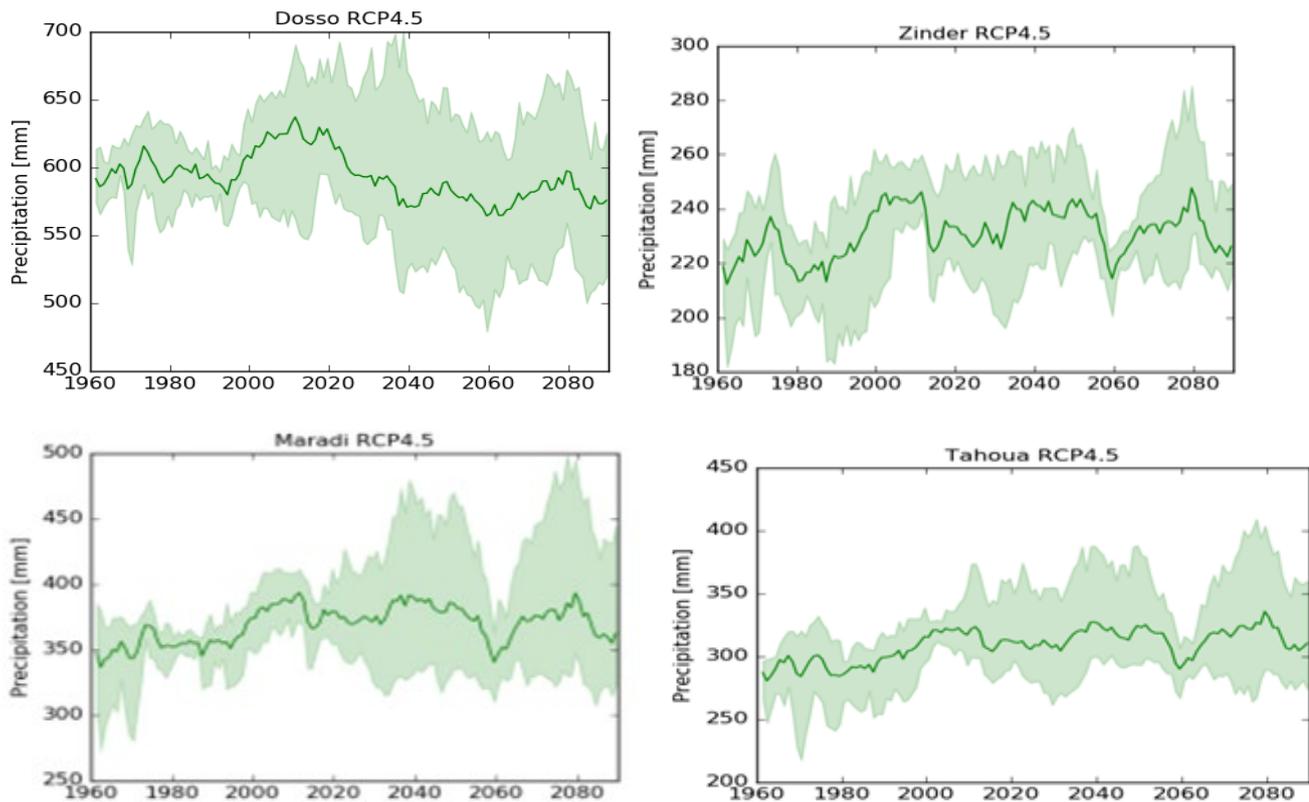


Figure 2: Precipitation projections for RCP 4.5.
Source: Precipitation and scenario RCP4.5 Climate Analytics, 2019

5. Four major drought-related emergencies have been reported in less than ten years in Niger. These have resulted in average harvest decreases of 25% and staple crop price decreases of up to 50%. In addition, heightened intensity of rain has increased the frequency of flash flooding and topsoil erosion, resulting in reduced soil fertility and land degradation. For example, Niger has experienced 35 extreme hydro meteorological events, including 18 floods (CRED-EM-DAT, 2014). The analysis of the rainfall series (1950-2013) of six stations in western Niger shows that the floods in the southern regions (see Feasibility Study) crossed by the Niger River (Tillabery and Dosso) are certainly related to the heavy rains recorded. However, the latest floods have also been intensified by the increasingly aggressive, consecutive rains recorded in Maradi in the North (Mahamadou, Moussa and Maiga, 2018). The West of Niger is experiencing considerably higher than average rainfall levels and greater intensity. The evolution and current trend of each drought index explain the upsurge and magnitude of recent floods

6. Currently, the main source of surface water is the transnational Niger River, 550 km of which flows through southwest Niger. Annually the country's total available water is estimated to be around 30 billion m³, most of which is in the Niger River. This amount of available water is highly dependent on rainfall and as such there are huge seasonal variations. Groundwater resources have been estimated at approximately 2.5 billion m³, of which only about 20% is currently used. In the southern part of Niger, where most of the target areas are located, groundwater is relatively accessible. Groundwater levels are rising in south-western Niger, paradoxically as a result of clearing of the savannah for millet cultivation (Favreau et al. 2009) – a phenomenon known as the Sahelian Paradox. With the clearing of natural vegetation, runoff increasingly accumulates into ponds, which serves to recharge the groundwater. There are also a number of smaller zones or areas where groundwater is exploited for intensive irrigation of dates and other cash crops (FEWSNET 2012). Most groundwater irrigation is still based on manual lifting, meaning that there is an opportunity to introduce more efficient and affordable irrigation systems. Pilot-testing of regulatory or other institutional and technical measures for sharing aquifers in a sustainable and equitable manner by the government and all stakeholders will be required.

7. The table below presents the investment required to mobilize water per type of irrigation systems in Niger.

Table 1: Cost of irrigation systems.

| Irrigation systems | Cost (*1000 FCFA/ha) |
|--|----------------------|
| Small and medium size AHA | 7500 – 10 000 |
| Private small irrigation | |
| a. Low-cost: borehole, well, manual pump, canal, hedges, barbed wire fences | 1500 – 2200 |
| b. Average cost: fodder, water traction (camel), canal, barbed wire fences | 3000 – 3500 |
| c. High cost: well for gardening with mobile pump, Californian network, hedges | 6000 – 6750 |
| d. Very high cost: well for gardening, group of mobile pumps, drip irrigation with low pressure, barbed wire fence, hedges | 7500 – 9000 |
| Big and medium-sized | High and variable |
| Périmètres de contre-saison (PCS) | 2000 – 5000 |

AHA: Aménagements Hydro Agricoles (Hydro agricultural developments)

PCS: Périmètre de contre saison (Dry season irrigation systems)

8. Climate change is a major threat multiplier to the agricultural sector in Niger and adds the increased tension of competition over diminishing natural capital for both farmers and pastoralists. This is particularly true in relation to water for irrigation, which will exacerbate the existing conflicts in the Sahel by increasing poverty and hunger and undermining human rights. It is a growing cause of forced migration, especially for rural millennials.
9. It is in this context that Niger signed the Paris Climate Agreement and its Nationally Determined Contributions (NDCs) set its unconditional reduction of carbon emissions at 3.5% by 2030⁴. Mitigation measures to achieve this include upscaling of sustainable land management practices to increase the resilience of ecosystems and improve carbon sequestration and doubling the renewable energy mix to reach 30% by 2030. However, despite the opportunities and profitability of the agricultural sector, access to financing to better invest in adaptation and mitigation remain a key challenge.
10. With a growing population, high demand for food products and projected economic growth, viable opportunities for sustainable agriculture finance have emerged. SUNREF⁵ West Africa is supporting the development of the practices of financial institutions in the region to facilitate access to green energy and promote the sustainable management of natural resources. This represents an opportunity for building innovative solutions to sustainably modernize and add value to agriculture. It also creates an opportunity for even greater investments in agriculture and for short and long-term financing, which helps make agriculture more attractive to young people and women (PWC, 2017). In Niger, green financing is still under-developed despite the high vulnerability to climate change and low adaptive capacity of Niger's agriculture sector. Current coping strategies for climate change impacts and reoccurring climatic hazards (such as droughts and floods) are inefficient. High interest rates – 12-15% in commercial banks and 10% within Banque Agricole du Niger (BAGRI)⁶ – pose a significant barrier to achieving these goals and prevent smallholders, farmers organizations (FOs), cooperatives and MSMEs from taking out loans to invest in sustainable agricultural practices and renewable energies.
11. Investments in private market and community-driven small and medium scale irrigation schemes and in sustainable land and water management practices have positive results and exhibit considerable potential for further investment. Rural electrification programmes for water supply systems (for growing crops, food processing and packaging, watering livestock, drinking water, laundry, bathing and other productive uses) also require affordable financing.

⁴ https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Niger%20First/Niger-INDC-final_Eng.pdf

⁵ SUNREF: A green credit line for companies developed by Agence Française de Développement (AFD)

⁶ Link to BAGRI Annex.

Financial institutions in Niger, including BAGRI, still face other obstacles such as a lack of awareness of the potential benefits of sustainable agriculture and green financing, the overestimation of risks due to the lack of technical knowledge and a lack of access to appropriate funding (particularly highly concessional funds) to scale up climate finance for local private investments. Helping remove these technical and financial barriers would allow these institutions to finance transformational change towards climate compatible investments in agriculture. Investing in the various options for improving the availability and use of water for agricultural and livestock production (including in irrigation) is critical to build the resilience of smallholders. This is only possible through the use of renewable energy technologies within agricultural value chains (energy for water pumps, distribution, processing, packaging etc.). In doing so, Niger will implement and scale up more low emission irrigation schemes for resilience building.

12. The objective of this five-year **Inclusive green financing for climate resilient and low emission smallholder agriculture** project is to increase the resilience of smallholder farmers to adverse impacts of climate change. This will be done by removing traditional barriers to accessing green financial and non-financial services. Additionally, the project will adopt and implement innovative adaptation and mitigation measures. These measures include:
 - Water capture
 - Borehole irrigation
 - In situ reintroduction of more stress-resistant breeds and crop varieties
 - Sand stabilization and other land management and agronomic techniques
 - Ecosystem-based adaptation (EbA)
 - Capacity-building and awareness raising on adaptation and mitigation in agriculture
 - Renewable energy technologies (RETs)
 - Energy for water mobilization
 - Value addition along value chains (processing, packaging, maintenance)
13. Key selected activities will be refined through parallel studies and capacity development during project implementation. Through substantial stakeholder engagement and policy dialogue/development with key partners such as FOs, MSMEs, cooperatives, financial institutions and sector ministries, the project will trigger a transformative approach and feedback loop that will aid in scaling up climate resilience building and low emission agriculture in Niger.
14. This initiative will be implemented in target regions (Maradi, Zinder, Taouha and Dosso) that are highly vulnerable to climate change and have great potential for agricultural development, but where banking services geared towards the agricultural sector are still limited. The Republic of Niger (RoN), through its Ministry of Finance, will be responsible for the implementation of this project. As mentioned, this project will complement the rural finance objectives of IFAD's current portfolio in Niger.

B. PROJECT/PROGRAMME DETAILS

B.1. Context and baseline (max. 500 words)

15. There are many inherent risks affecting Niger smallholder farming that discourage the private sector and particularly the banking sector from investing. Financial institutions often perceive small-scale agriculture as being too risky and are reluctant to lend farmers money, particularly in the context of climate change and climate variability. Niger is one of the hottest and driest countries in the world and over 75% of the country is “hyper arid desert”, which is characterized by very little rainfall and low population densities (World Bank 2015). Rainfed agriculture is practiced on only about 10% of the total land area, where rainfall averages around 350-600 mm annually (0.2% of cultivable land is under “managed water,” i.e. some form of irrigation). Around 35% of Niger’s land resources (including pastureland) are or can be used for productive purposes. Rainfall is concentrated in a four-month period (June to September) and is highly variable and unreliable. Summer rains have increased during the past 20 years and have almost returned to 1960–89 levels. Temperatures have increased by 0.6° Celsius since 1975, amplifying the effect of droughts (Fewsnet, 2017). Niger has the lowest average rainfall among the comparator countries used by MCC (2013). For rainfed crop producers, this pattern of frequent drought has several important implications, as it makes investment of scarce cash in inputs (fertilizer, improved seeds, etc.) too risky for most smallholders who often unable to produce sufficient food to meet household needs throughout the entire year. Dependence on a single cropping season is inherently risky when there is no irrigation during the dry and lean seasons, as farmers have to wait for the following rainy season.
16. The existing financial services intended for rural communities rarely benefit rural women. Women’s access to these services is constrained by sociocultural, economic/legal and in some cases educational barriers. Although the Constitution of Niger guarantees equality of men and women, the reality in rural areas is quite different. Family law, including access to resources such as water and land, is governed by a combination of customary and Islamic law (or local interpretations thereof). At the same time, financial institutions also face constraints when extending services to rural women, partly due to a lack of general understanding of the rural and agricultural sector, the gender dynamics in rural areas, high transaction costs when dealing with frequent small loans, and unclear and unfavorable land tenure and property rights.
17. Niger is the second most vulnerable country in the Sahel to climate change and climate vulnerability; it is the 46th least ready country to combat climate change effects. The country is exposed to desertification, recurrent droughts and declining rainfall (175th out of 181 countries on the ND-GAIN index⁷ in 2017). This highlights both a great need for investment to improve readiness and a great urgency to implement adaptation actions. All models predict an increase in temperature ranging from 1.6°C to 2.9°C between 2020 and 2065, compared to the 1961-1990 reference period. Analysis of the 1961-2010 period indicates that there has been a significant decrease in rainfall since 1970, with a corresponding average rainfall deficit of 20 per cent in the south and more than 30 per cent in the western and central regions. For further details on climate trends in Niger please refer to the Feasibility study in Annex 2.
18. Severe droughts occurred in 1966-1967, 1973-1974 and 1983-1984 (Prolinova, 2008). In the last 19 years alone, since 2000, four major droughts have occurred and there has been an increase in the invasion of farms by locusts, pests and enemies of crops under a changing climate. The 2009 drought affected approximately 7.9 million people⁸, 2,7 million head of cattle (with losses estimated at USD 805 million), and led to a decline of 4 per cent in per capita GDP and more than 13 per cent in agricultural production⁹. As for the 2011 drought, cereal production declined 28 per cent and the stock of animals was reduced by 8 per cent as a result of a 21 per cent decrease in rainfall. Niger was also a victim of unprecedented floods in 2012, which affected more than half a million people. With already challenging natural conditions, exposure to greater frequency of climate shocks weakens the population’s resilience. Consequently, many pastoral communities have been forced to become semi-agricultural because of prolonged droughts, thus losing their way of life (AGRHYMETH, 2016). This has led the prices of staple crops to increase by up to 50 per cent compared to the same period a year ago. The magnitude of anticipated economic impacts of climate

⁷ This index summarizes a country's vulnerability to climate change and other global challenges in combination with its readiness to improve resilience. Vulnerability measures the exposure, sensitivity and ability of a country to cope with the negative effects of climate change, taking into account the following sectors: food, water, ecosystem service, human habitat and infrastructure. Readiness measures the ability of a country to leverage public and private investments for adaptation actions, taking into account three components related to economy, governance and society.

⁸ IISD. 2013

⁹ World Bank. 2017

change are more pronounced in Agadez, Taouha, Tillabery Zinder and Maradi which have been declared structurally vulnerable. Crop yields are very low and stagnant and the population is growing very rapidly in these regions. They are considered hotspots where concentration of population is the highest and where significant and highly concessional financing for adaptation and mitigation in the agricultural sector is the most needed. Agricultural production is expected to drop 20 per cent if adaptation measures are not put into place (Agrhymeth, 2017). Niger has offset the rising demand for food due to very rapid population growth by greatly expanding cultivated land. According to USAID, 2017, if the expansion of farmland slows, stagnant yields and population growth could lead to increased food insecurity

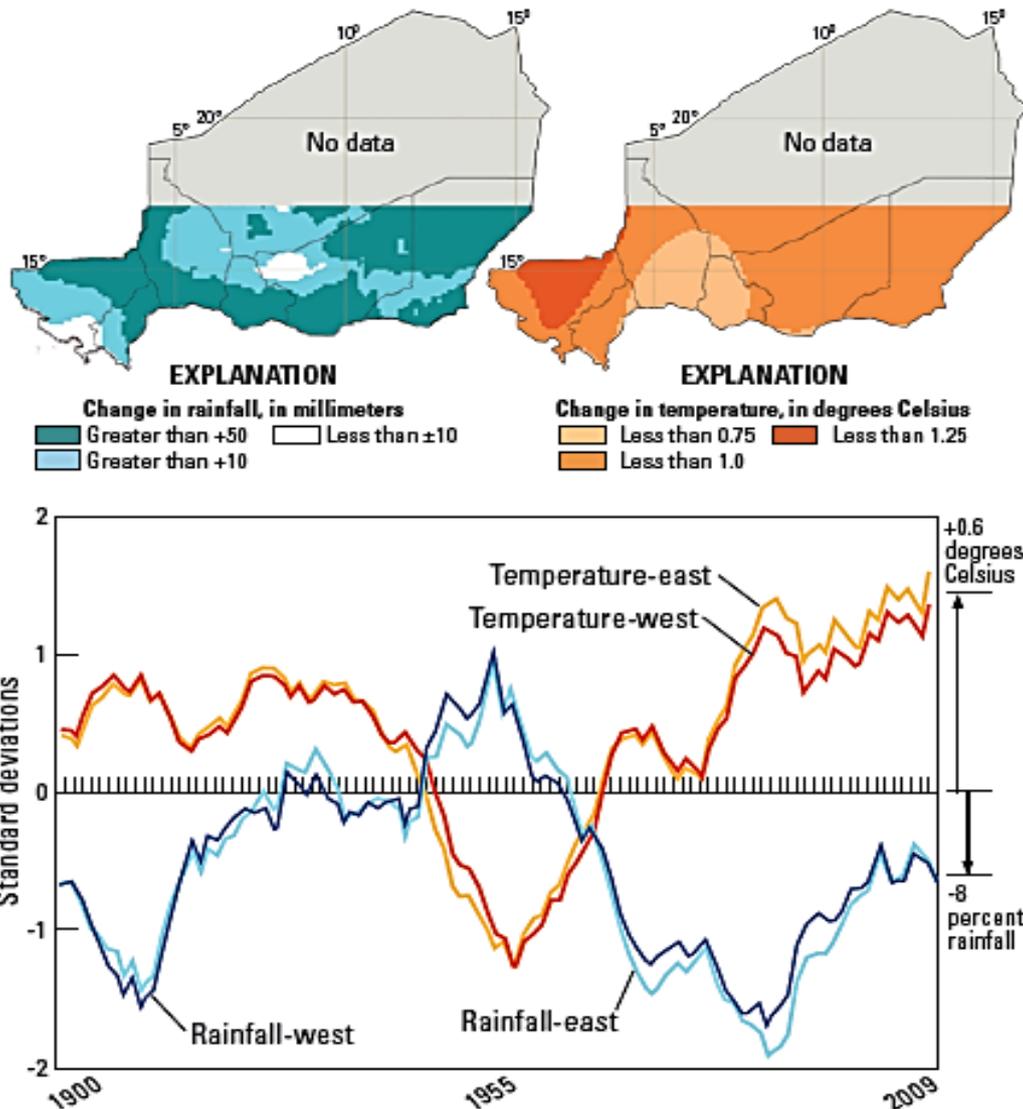


Figure 3: Observed and projected change in June-September rainfall and temperature for 1960-2039 (top), together with smoothed rainfall and air temperature time series for June-September for eastern and western Niger. Mean rainfall and temperature are based on the 1920-1969 time period (USAID,2012)

19. In such a context, small holder farmers, MSMEs, FOs and cooperatives are reluctant to borrow and invest because of their difficulty in managing climate risks such as weather shocks, recurrent droughts and floods, livestock disease and desertification.
20. Water remains the most critical constraint on agricultural production. Irrigated land is more productive and profitable than rainfed land particularly in Dosso, Tahoua Maradi and Zinder (targeted areas). Nevertheless, only 0.2% of agricultural land is under some form of water management. Of Niger's 270,000 hectares of irrigable land, 140,000 ha are concentrated in the Niger River valley. The rest of the country's irrigation

potential comes primarily from the Komadougou River (part of the Lake Chad basin), several small seasonal rivers, dry riverbeds with easily accessible groundwater (*dallois*), the small oasis basins of Manga and Air and in some areas groundwater that is accessible with a pump. It therefore appears that Niger's irrigation potential is under-exploited: less than 100,000 ha, about 37% of estimated potential, are under irrigation.

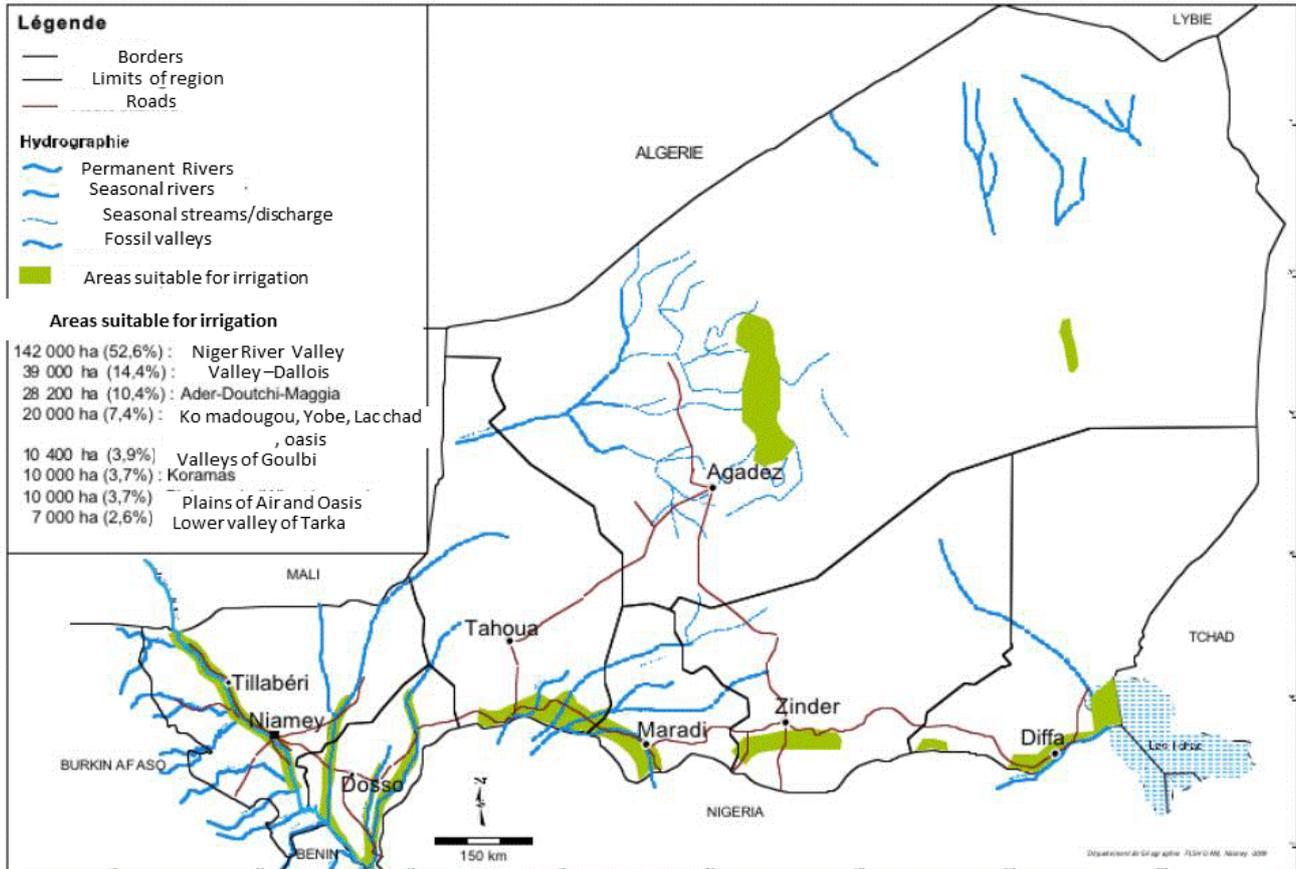


Figure 4: River basins and spatial irrigation potential in Niger.

Source: Map extracted from IDE 2012a and adapted; the figures on irrigation potential from the Ministry of Agriculture were used.

21. In addition to water harvesting, several types of irrigation techniques are being implemented and constitute ways to better adapt to climate change and climate variability. Nearly all aménagements hydro-agricoles (AHA) and medium-to-large irrigation systems are in the Niger River Valley where rice is the main crop. However, in some areas, high value vegetable crops are grown in the dry season, as land use has evolved over the past years.

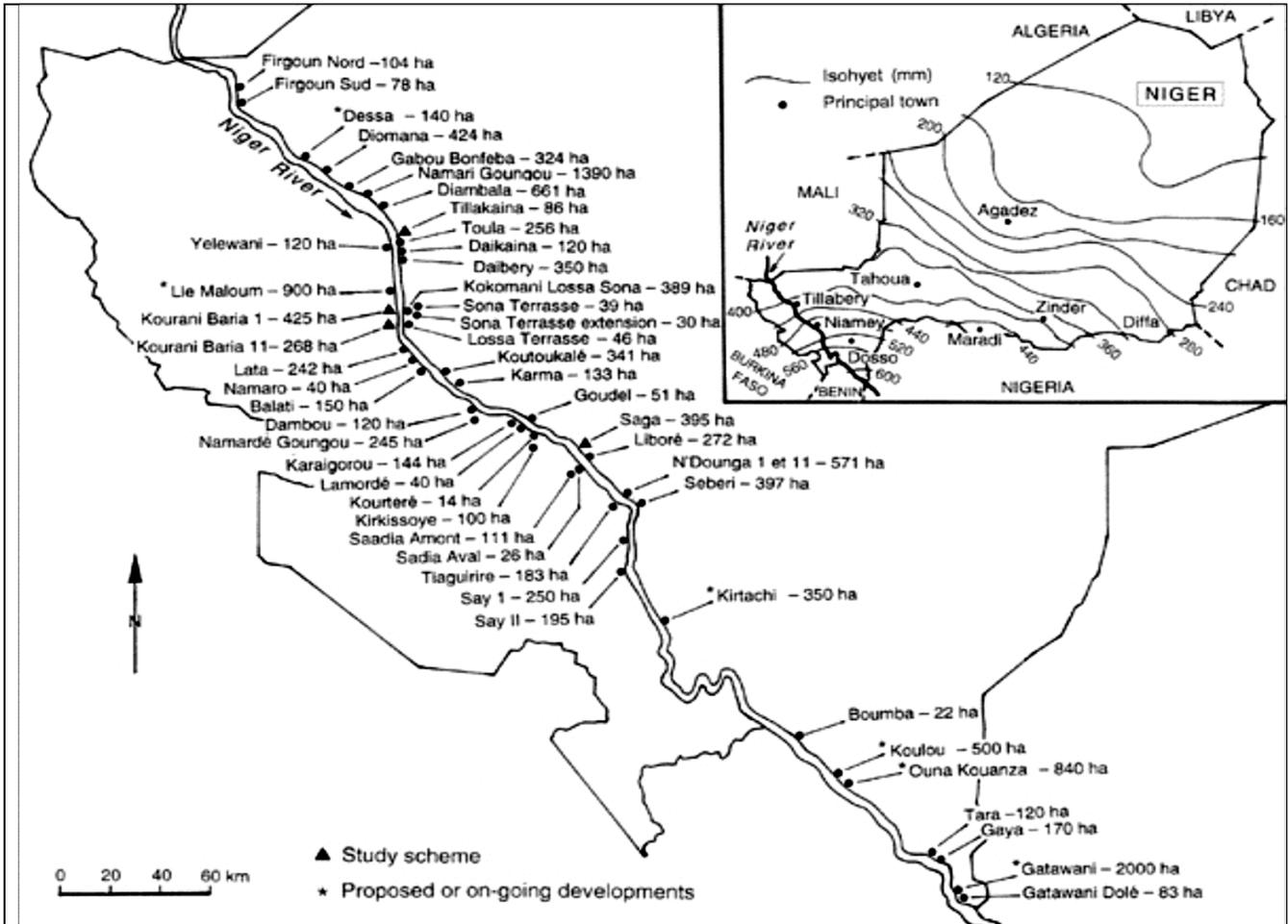


Figure 5: Location of Irrigation Systems in the Niger River Valley in Late 1990s (Inset: Isohyets of mean rainfall, 1961–1990)

Source: Abernethy et al. 2000.

22. Small-scale private irrigation has developed rapidly during the past decade and now officially accounts for 16,000 ha; it covers more area than the AHAs. Manual and/or pedal-based pumps or motorized pumps run on fuel are costly and less efficient water distribution systems. Intensive gardening models based on drip irrigation and small pumps have been shown to be very profitable (Woltering et al. 2011a, 2011b). Most small-scale irrigation is based on groundwater and it appears that Niger has considerable groundwater resources yet to be exploited (Villholth 2013). The volume of renewable groundwater is estimated at 2.5 billion m³, of which only about 20% is currently used. The most common irrigation system is the off-season perimeter systems (*Périmètres de Contre-Saison* or PCS). More than half of Niger's irrigation schemes are PCS systems. Unlike small-scale private irrigation, these schemes are collectively managed at the community watershed level. Investments have generally focused on the collection of water and the protection/fencing of plots, and in some cases, systems for lifting and distributing water. They include manual or mechanized irrigation from wells, streams and ponds as well as flood recession agriculture. These plots (usually about one hectare in size) are used to grow crops during the dry season and are particularly important in years when the main rainy season harvest is poor.
23. There are approximately 60,000 hectares under PCS irrigation management covering all regions of the country, making this by far the largest type of system in terms of area. There are two types of PCS: (a) traditional sites in existence prior to 1984 and operated by their owners who may have benefited from government support (e.g. for well sinking and fencing); and (b) sites specially developed by the state after 1984 to accommodate residents who are annually displaced by drought. In the latter type of scheme, unlike in the first, cultivation in the dry season (October to May) is only carried out when the results of the rainy season are poor (Republic of Niger 2005). With regard to flood recession agriculture, Niger has approximately 12,000 hectares of "non-equipped" flood recession agriculture. These are areas that are

cultivated after river floods and seasonal ponds recede, when the rainy season ends, for example. They are found mainly in the Lake Chad and Niger River basins and there is potential to increase these areas. There is also potential to improve their productivity through adequate investment and better adaptation to floods caused by climate change. With regard to rainwater harvesting for rainfed agriculture, an estimated 300,000 ha have access to water thanks to the collection of runoff water using a variety of techniques (pits, bunds and dikes). This improves water availability for crop production. Using a broader definition of sustainable land management (SLM), Pender and Ndjeunga (2007) claim the area improved is closer to 2 million ha.

24. Supporting the adoption of irrigation techniques and the expansion of irrigation systems, such as the System of Rice Intensification (SRI), in Niger with adapted practices and RETs will lead to; (i) higher yields (from an average 4 t/ha up to 9 t/ha); (ii) reduced GHG emissions and the mitigation of the impacts of climate change; and (iii) cutting water use by up to 50 per cent (which allows farmers to cultivate a wider area by making rice fields more resilient). For other crops, adequate irrigation systems, equipment and infrastructures will expand the period of production, increase productivity during the dry and lean season and improve the resilience of smallholder farmers. Key irrigation systems are summarized in the table of agricultural water areas in Niger below:

Table 2: Primary irrigation management techniques in Niger

| Category of management | Managed area (ha) | Exploited area (ha) |
|--|-------------------|---------------------|
| AHA (<i>Amenagements Hydro-Agricoles</i>) (ONAHA) | 13,850* | 12,735* |
| Commercial irrigation | <1,000 | <1,000 |
| Small scale private irrigation | 16,150* | 16,150* |
| PCS (<i>Périmètres de Contre-Saison</i>) | 70,000* | 60,000* |
| Flood recession cropping area, non-equipped | 12,000 | 10,000 |
| Total agricultural water-managed area** | 112,000 | 98,885 |
| Collection of runoff water (water harvesting) | 300,000 | 300,000 |
| *Estimates based on 2005 <i>Stratégie nationale du développement de l'irrigation</i> | | |
| ** Excludes commercial irrigation | | |

Source: World Bank, 2009. Reproduced and adapted from MCC 2013. Note: "Managed area" refers to area equipped for irrigation; "exploited area" is the extent actually cropped.

PCS: Perimetre de contre saison (Dry season irrigation systems)
AHA: Amenagements Hydro Agricoles (Hydro agricultural development)

25. To seize these opportunities to better adapt to climate change and increase the resilience of smallholder farmers, the Government of the Republic of Niger requested IFAD's support for the design and implementation of the "Project to strengthen the resilience of rural communities to food and nutrition insecurity in Niger (PRECIS)" (see the attached PRECIS Funding Proposal). The PRECIS' overall objective is to sustainably improve the food and nutritional security of rural households and strengthen their resilience to climate and natural resource degradation. Its development objective is to increase the incomes of rural households, improve their livelihoods and ensure the socio-economic integration of young people (men and women) into promising rural professions. Because of the high needs and adaptation gap, the GCF project has been prepared to complement the rural finance component of PRECIS in a context where Niger's capital markets are extremely underdeveloped and no stock market has been developed so far. Although a regulatory system exists and policies encourage portfolio investment, there is little market liquidity or opportunity for investment in the agricultural sector. Credit for the private sector is dominated by large corporations, while the agriculture, livestock, forestry and fisheries sectors (which account for more than 40

per cent of GDP) receive less than one per cent of total bank credit at very high interest rates (12% on average). This is partly due to limited decentralized financial systems (DFS) and very little access to financial resources, especially medium and long-term loans, which are needed to finance the transition towards a resilient and low emission agricultural sector. This situation is often at the root of the mismatch between supply and demand for financial services. A few commercial banks and the only state-owned Banque Agricole du Niger (BAGRI) have financial resources but are still reluctant to finance agriculture, which is considered risky because of significant fluctuations in prices, climatic hazards and a lack of structured stakeholders. Development programmes and projects have set up financing mechanisms for family farms, which nonetheless encounter the following limitations: high interest rates, the lack of environmental, social and climate safeguards integrated into lending products and the lack of capacity to develop bankable business plans that promote climate resilient and low emission agriculture.

26. When combined with a weak institutional capacity and weak advisory services, limited access to information systems (including climate data) to support decision-making and the lack of cross-sector coordination mechanisms and enabling environment, these factors lead to low productivity. This, in turn, increases food insecurity and malnutrition and contributes to desertification and the degradation of natural resources. In addition, gender inequality is high in Niger. The country ranks 154th out of 155 countries on the gender inequality index (UNDP 2015). These disparities present a challenge for development, particularly in areas of illiteracy, mortality, morbidity, access to assets, sexual violence and early marriage. Women, especially in rural areas, face higher unemployment levels and carry a heavy burden of work such as collecting water and firewood, agricultural work, preparing meals or child rearing.

Impact of climate change on the agricultural sector

27. Niger's agriculture sector has been experiencing a range of climate impacts over the last past decade, mainly caused by unreliable, irregular and unpredictable rainfall patterns and intense rainfall that is concentrated in a short period. Deforestation and clearing the savannah for millet cultivation (Favreau et al. 2009) increases water runoff into ponds that serve to recharge the groundwater, which is used for intensive irrigation of dates and other cash crops (FEWSNET). This is exacerbated by unsustainable agricultural practices. Prolonged and regular periods of drought increase the pest population, such as locusts, which greatly reduce the yields of key crops (such as millet, maize, sorghum and rice) and thus threaten food security. In addition, higher temperatures lead to lower yields and less fodder and pasture for livestock, which puts animals at risk. Four major drought-related emergencies have been reported in less than ten years, resulting in a decrease of yields by an average of 25%, increases in the prices of staple crops by up to 50% and reductions in food availability and economic return from agricultural products. In addition, heightened intensity of rain events has increased the frequency of flash flooding and topsoil erosion, resulting in reduced soil fertility and land degradation. Recent floods have also been worsened by the impact of increasingly aggressive, consecutive rains recorded in Maradi in the North (Bahari Ibrahim Mahamadou, Ibrahim Bouzou Moussa et Oumarou Faran Maiga, 2018). Average rainfall levels in the west of Niger are considerably higher and have become more intense, which also affect crop production. Based on the IFAD Climate Adaptation in Rural Development – Assessment Tool (CARD)¹⁰, climate models¹¹ indicate that millet production is predicted to decrease by 5.87%, groundnut by 10.39% and rice by 7.82% over the next 20 years at national level. This is of particular importance in the Maradi, Zinder, Tahoua and Dosso regions where late and erratic rainfalls and higher frequency and longevity of dry spells have been observed. The projections based on the emission scenario RCP4.5 predicts a decrease up to 20 mm per year in terms of rainfall for 2031-2050 with delayed and shorter rainy seasons compared to an average of 120 mm registered during the period 1986-2005 for the Maradi region and 10 mm for Zinder, Tahoua and Dosso. (see feasibility study annex)

Barriers and opportunities with the GCF:

28. One of the key barriers to financing small-scale climate-resilient agriculture and promoting the use of solar energy systems for agriculture in Niger is the credit risks stemming from the nascent market conditions.

¹⁰ The Climate Adaptation in Rural Development – Assessment Tool (CARD) is a platform that helps explore the effects of climate change on the yield of major crops. It is intended to support the quantitative integration of climate-related risks in agricultural and rural development investments and strategies, including economic and financial analyses (EFA). Various climate models are included in the tool for 17 major crops in nearly all African countries.

¹¹ IFAD Climate Adaptation in Rural Development Assessment Tool

Another is the limited availability of long-term financing (over 12 months) that financial institutions (FIs) or companies require in order to provide consumers with funding for solar energy products, particularly those required by the agricultural sector. The key barriers are summarized in the table below:

Table 3: Key barriers and opportunities summary

| Key barriers | Business As Usual (BAU) | General alternative solutions for mitigation & adaptation compared to BAU |
|--|---|---|
| <p>Limited knowledge of climate change impacts on smallholder agricultural value chains and landscapes and effective adaptation interventions, especially for in the southern part of the country where irregular increase of rainfall results in floods from the high discharge levels of the Niger River</p> | <ul style="list-style-type: none"> - Slash and burn agriculture and mono-cropping - Clearing forests for agriculture and charcoal - Planting at times of the year when rain is no longer certain to fall - Inadequate post-harvest storage techniques - Lack of scientific data and knowledge and even basic information on the impacts of climate change | <ul style="list-style-type: none"> - A databank containing information on innovative projects, organized as an integrated platform offering easy access to information on best adaptation and mitigation practices to farmers, FOs, cooperatives and MSMEs helps reduce slash and burn agriculture, land clearing and inappropriately timed planting and post-harvest techniques currently employed in Niger - Capacity-building for smallholder farmers/FOs and MSMEs on adaptation and mitigation and improve financial literacy and opportunities for green jobs. This will help overcome knowledge barriers related to climate change and adaptation. - Support leadership programme for women and youth to increase their access to resources - Change in land management practices, particularly in the southern part where floods are observed, near Lake Chad and along the Niger River - Expand irrigation techniques such as the System of Rice Intensification (SRI), which also reduces GHG emissions and mitigates the impacts of climate change by making rice fields more resilient |
| <p>Limited or non-existent special lines of credit to promote low emission and climate resilient agriculture, ecosystem-based adaptation (EBA) and sustainable energy for agriculture</p> | <ul style="list-style-type: none"> - Limited commercial financing of climate resilient agriculture, EBA and renewable energy sources for agriculture restrict the growth and performance of the agricultural sector - Perception of smallholder farming as a risky business and thus, few actors are willing to take the risk of providing concessional loans for climate resilient agriculture - Not enough liquidity in the market, maintenance issues and the | <ul style="list-style-type: none"> - Establish concessional financing schemes that combine grants with credit to promote agricultural and rural finance - Increase investment in climate resilient practices and renewable practices - Scale up green lending to overcome the belief that it is a risky strategy. |

| | | |
|---|--|--|
| | <p>regulatory and legal framework underpinning the energy sector is still at a nascent stage</p> | <ul style="list-style-type: none"> - Establish a regulatory framework on green lending to overcome issues appearing in the nascent regulatory frameworks. |
| <p>Limited productive investments in low emission and climate resilient agriculture, forest management and energy for agriculture</p> | <ul style="list-style-type: none"> - High interest rates from financial institutions (10% at BAGRI and more than 12% at commercial banks) and customers need to provide collateral - Limited financial resources for investing in adaptation measures, EBA and sustainable energy for agriculture to cope with climate change - Inability to develop viable businesses - Limited investments (1% in agriculture and insignificant amounts in low emission and climate resilient agriculture) | <ul style="list-style-type: none"> - Pilot highly concessional loans to reduce high interest rates - Build capacity to develop viable business plans that promote low emission, climate-resilient agriculture to overcome current limitations - Unlock more investments in the sector to enhance improvements in climate resilient practices across the agricultural sector |
| <p>Policy, regulatory and capacity constraints to adopting renewable energy in the agricultural sector</p> | <ul style="list-style-type: none"> - High fossil fuel subsidies deter Renewable Energy Technology (RET) companies from entering rural markets where transaction costs are high - Lack of fiscal incentives for existing RET suppliers - Limited purchasing capacity of farmers and high costs of RETs - The payback period is often too long for an individual farmer - Limited presence of microfinance institutions (MFIs) to provide loans for RETs - Traditional practices of using firewood and charcoal perceived as free or inexpensive - Limited knowledge on RET and their contribution to reducing energy expenditures for charcoal, diesel and kerosene - Increased rural youth migration (due to lack of employment opportunities beyond farming) - Limited technical training programs in RET sector - Limited skilled expertise for installation and operation and maintenance of RETs | <ul style="list-style-type: none"> - Improve country institutional and regulatory framework to govern climate financing for adaptation and mitigation - Provide capacity-building to empower smallholders to demand policy changes in favor of low-cost RETs (e.g. waiver of import duties on RETs). More market demand for RETs companies in rural areas. - Build knowledge and capacity of local policy and decision makers at national and sub-national levels - Build private sector confidence in investing in RETs in rural areas, which will lead to significant cost reductions of RETs through the pursuit of economies of scale - Institute a people-centred approach to implement RETs in communities where trust has been established. - Engage women who are usually responsible for daily activities such as collecting firewood and hauling water to reduce current levels of natural resource exploitation - Promote the employment of youth in RET deployment and after-sales services and as the next generation of users to reduce youth migration from rural areas. |

| | | |
|--|--|--|
| | | <ul style="list-style-type: none"> - Provide incentives for design improvements leading to the development of socially and culturally acceptable RETs - Build capacity of actors in collaboration with universities/research institutes that provide RET courses to increase levels of skilled RET experts in rural areas |
| <p>Limited capacity and coordination mechanisms in the government and local communities on implementing EbA and climate-resilient and low emission agriculture. Key sector ministries in charge of agriculture, energy and forestry have limited technical and institutional capacity to implement EbA and energy for adaptation and climate resilient agriculture</p> | <ul style="list-style-type: none"> - Silo approach and lack of coordination of actions to promote climate resilient and low emission agriculture - Limited policy and regulatory interventions from the governments to accelerate key reforms and frameworks for green financing - Weak capacity and lack of training of government staff - Limited capacity of central and local government to accompany the financing sector in developing the right governance system for green financing - Limited resources available to local government authorities for investment in low emission and climate resilient smallholder agriculture | <ul style="list-style-type: none"> - Strengthen technical and institutional capacity of the government (central and local) to promote green financing, EbA and climate-resilient agriculture and enhance awareness of the FOs, cooperatives, MSMEs and MFIs - Support cross-sector coordination mechanisms with all stakeholders (public, private, local communities and organization) on adaptation and mitigation - Develop tools, instruments and strategies to enable communities, businesses and the public sector to respond to climate change and variability - Support high level policy dialogue to close the financing gap both on adaptation and mitigation |

29. Addressing climate change: To address the impact of climate change facing smallholder farmers, FOs, MSMEs and the financial sector, there is a need for a paradigm shift in Niger. Moving from an economy driven by a recurrent cycle of climate-vulnerable subsistence livelihoods towards a sustainable green economy based on climate-resilient livelihoods requires better access to financial and non-financial services that support farmers in adopting and implementing best climate change adaptation and mitigation measures. This support should focus particularly on the use of the best irrigation options during dry and rainy seasons, such as SRI. According to the Niger National Adaptation Plan (NAP, 2016), without appropriate climate finance, affordable credit and proper investment, climate change will lead to increased vulnerability and livelihood impacts. These impacts include: reduced agricultural production, food insecurity, reduced fishery resources, water shortage and groundwater depletion, increased disease and or health problems, loss of forest areas, production, biodiversity and land, as well as land degradation and acceleration of the desertification process. There is enough evidence to prove the correlation between climate risks and the lack of investment from the financial sector. Greater access to green financing is essential for creating opportunities to pursue adaptation and mitigation goals and unlocking investments opportunities in low emission and climate resilient smallholder agriculture. Greening financial institutions will incentivize the agriculture sector and lead more stakeholders to adopt climate-resilient practices and mitigation measures.

30. Adaptation and mitigation solutions: Under the Paris Climate Agreement signed in 2015, Niger has committed to an unconditional 3.5% reduction in emissions by 2030 with a business-as-usual scenario and a 34.6% reduction by 2030 on the condition that it receives international support. Key optimum adaptation and mitigation measures suggested in National Adaptation Plan (NAP) for the agricultural sector and the

National Development Plan (*Plan de Développement Économique et Social*, PDES) for 2017-2021 include: building skills and knowledge (approaches, tools and instruments) to mainstream climate change considerations into the agricultural sector and into local planning and budgeting processes; strengthening institutional and regulatory frameworks including those related to financing adaptation and mitigation measures and adaptation options (e.g. drought tolerant seeds in light of their contributions to medium and long-term sustainable socio-economic development, cost-effectiveness and efficiency).

31. In light of the above, the proposed adaptation and mitigation solutions for the GCF project are to improve access to financing and further promote the adoption of climate resilient and low emission smallholder agriculture practices (irrigation) and solar energy systems throughout the value chains to reduce greenhouse gas emissions. It will further support IFAD PRECIS inter alia by: (i) increasing and diversifying agro-sylvo-pastoral and fisheries production, (ii) ensuring regular supply of rural and urban markets in agricultural and agro-food products and (iii) improving the resilience of the population to food crises, natural disasters and climatic shocks.

B.2. Project/programme description (max. 1,000 words)

32. **The Inclusive green financing for climate resilient and low emission smallholder agriculture** project will improve the access of farmers' organisations (FO), women and youth associations, cooperatives and MSMEs to financing for climate resilient agriculture techniques and practices. These include various options for irrigation and renewable energy techniques in agriculture as a means to better adapt to climate change in Niger. The main objective is to support the adaptation of agricultural systems and increase resilience to climate change of smallholder farmers, FOs (including youth and women's organizations), cooperatives and MSMEs in Niger. The project also seeks to promote the adoption of solar energy systems (micro, mini grids, stand-alone solar systems, solar kits, etc.) for agriculture to reduce greenhouse gas emissions caused by energy generation for agricultural practices. The project will target 175,000 people.
33. The Republic of Niger seeks a total of EUR 8.5 million of GCF resources in the form of loans with zero interest rate (0.00%) and grants. Of the GCF EUR 8.50 million, EUR 5.95 million (GCF loan) will be set aside for a financing facility and the remaining EUR 2.55 million (GCF grant) will be utilized to finance technical assistance and capacity-building. IFAD EUR 1.7 million (grant) will be used to fund adaptation activities whilst the remaining IFAD EUR 425,000 (grant) will be used to fund the SAHEL AWARD and project management costs.
34. **IFAD Grant (IFAD-BAGRI cost sharing mechanism):** IFADs main investment has set up a tripartite cost sharing mechanism to enable farmer's better access to financing. 0 (The tripartite cost-sharing financing mechanism is lodged with BAGRI and is funded in the ratio 10:40:50; i.e., 10% matching contribution from end-borrowers (project beneficiary groups with BAGRI-approved business plans), 40% matching grant from PRECIS through term deposits for the BAGRI-approved business proposals, and 50% loanable resources from BAGRI's own liquidity, which could include (or not) the GCF resources The full methodology of this mechanism will be detailed in the Projects Implementation Manual). The IFAD portion of the tripartite cost sharing mechanism will be implemented in alignment with IFAD rules and procedures.
35. Sub-loan terms will be set to encourage women farmers to adopt climate-smart agricultural practices, EbA's and sustainable energy for agriculture. They will be defined as part of the incentives in the protocols during the first year of the project. Furthermore, this financing facility will dedicate part of the funds to farmers and youth-led SMEs, women-led cooperatives or FOs as per the project criteria and as a means of addressing women's unequal access to productive resources in the agriculture sector.
36. **GCF Grants:** Grant resources of the GCF will be used to strengthen BAGRI and local micro finance institutions (MFIs), through the development of a financing facility (under BAGRI in Component 1). This will enhance partners' organizational and technical capacity to mainstream adaptation and mitigation in smallholder agriculture metrics into loan terms, governance and management of loan products and green-line policy gap awareness raising. Climate smart credit scoring systems for financial institutions will also be introduced without concessional backing to improve the agricultural lending portfolio. This will create a strong incentive for farmers to adopt climate smart practices by using tools and instruments such as: smart credit-scoring tool to assess business plans, loan agreements and M&E of investments; CO2 measurement tools; and compliance tools to assess social, environmental and climate risks and to define an improved

course of action to enhance sustainability. Technical assistance will also be provided to the Agence Nationale Des Energies Solaires (ANERSOL) to support the development of the renewable energy sector (Component 2). To support this, existing IFAD-funded country project teams coupled with external consultants will provide hands-on capacity-building (training and technical assistance) to FOs, women and youth organizations, cooperatives and MSMEs on the development and submission of business plans or projects that contribute to promoting low emission and climate resilient agriculture (including livestock raising, forestry and fisheries), EbA and renewable energy for agriculture. Further, an annual Sahel Award Ceremony (Component 3) will be organised by BAGRI with the support of IFAD to recognize the best business plans with the greatest impact on the ground. Criteria for the selection of recipients of the Sahel Award will be designed to ensure that at least 45 per cent will go to MFIs, FOs, cooperatives and MSMEs led by women and 55 percent to those led by youth. Technical assistance will be provided to help define the selection criteria and will be coordinated by a National Selection Committee. The project will collaborate with initiatives such as AKON lighting Africa¹² to build synergies and complementariness but also to increase the country efforts on climate action. Through this partnership, the project will also promote the use of art to achieve the expected results particularly for the Sahel Award.

37. The GCF project will benefit from IFAD's investments in Niger, which aim to help small producers overcome production and marketing constraints through two technical components and a management and coordination component (described in detail below). Also, the following PRECIS components will be implemented so as to complement the GCF project :
- *Component 1 - "Sustainable agricultural development and strengthening the resilience of rural households"*: This component's expected outcomes will be the diversification of production, increases in yields and better adaptation to external shocks, particularly climatic shocks, for rural women and men producers (including young people) and improvement of the health and nutritional security of vulnerable rural households.
 - *Component 2 "Promotion of youth entrepreneurship and access to markets"*: This component's expected outcomes will be enabling rural producers (especially women and young people) to better exploit the surpluses of their agro-sylvo-pastoral production by marketing them in middle markets that supply domestic consumption centres and cross-border markets and helping young entrepreneurs sustainably integrate their businesses into the local, regional and national economy.
38. Of the total GCF resources of EUR 8.50 million, EUR 2.55 million will be provided in the form of grants to build the capacity of BAGRI and MFIs and to promote the adoption of climate smart practices and the promotion of renewable energy for agriculture so that Niger may become a champion of lending for low emission and climate resilient smallholder agriculture. See Components 2 and 3 below for details.
39. A Programme Management Unit (PMU) will be established at BAGRI and dedicated to the day-to-day implementation of the project and reporting on impact and results within the timeline. This Funded Activity is complementary to IFAD investment in the country associated with the Ministry of Agriculture (MoA). MoA will provide the technical supervision on activities related to capacity building and mobilisation of the IFAD resources in this project. This will be in accordance with the IFAD Country Program Approach in Niger to benefit from existing institutional arrangements and mechanisms.. However, decision-making and approval authority on the channelling of GCF proceeds and implementation of the Funded Activity will rest with the RoN through its Ministry of Finance exclusively. The RoN through its Ministry of Finance will be in charge of the supervision and monitoring of the GCF component in each region where coordination and supervision systems are already in place in conjunction with the GCF PMU within BAGRI in order to ensure efficiency
40. ***Component 1: Innovative Financing Facility to foster the best adaptation practices and use of renewable energy along agricultural value chains (GCF loan-IFAD grant: BAGRI)***. The aim of this facility is to support FOs, women and youth organizations, cooperatives and MSMEs (including agribusiness dealers) and photovoltaic (PV) operators in accessing credit at highly concessional rates and in adopting and implementing best climate change adaptation practices, particularly irrigation techniques during both rainy and dry seasons, EbA and mitigation measures that use solar energy for agriculture. Of the GCF EUR 8.50 million, EUR 5.95 million will be granted as a loan to the financing facility. This will be broken down

¹² Akon lighting Africa is a project started in 2014 by famous music artist Akon with Samba Bathily and Thione Niang, political strategist and social entrepreneur. The goal of the project is promote solar energy in Africa.

into two mutually reinforcing sub-components focused on climate resilient value chains and EbA (financed in window 1) and powered through green energy access and generation (financed in Window 2).

41. **Output 1.1:** Established Financing Facility within BAGRI with a line of credit to support concessional loans to FO, women and youth organizations, MSMEs cooperatives, commercial banks to adopt the best adaptation practices along agricultural value chains particularly for irrigation to raise agricultural yields, even when facing increases in the frequency of droughts. Financing Window 1 created, which is dedicated to loans for adaptation measures (funded with GCF loan EUR 2.975 M and IFAD grant EUR 1.7M yields for agricultural produce in the face of increasing droughts. Creation of financing Window 1 dedicated to loans for adaptation measures funded with GCF loan EUR 2,975 M through a dedicated finance facility described above IFAD will also provide a grant of EUR 1.7 M that will be used to lower BAGRI interest rates of loans (see paragraph 45) for the same adaptation activities and target beneficiary group as the GCF loan (see Output 1.1 of Annex 2a). Although, this IFAD grant (under the tripartite cost sharing mechanisms) is not blended with the GCF line of credits, it targets the same beneficiaries, and will be subject to the same eligibility criteria, tools and protocols to be developed by the GCF project. Targeting the same beneficiaries with the both the GCF line of credit and the PRECIS tripartite cost-sharing mechanism qualifies this combination of resources as a co-financing and the PMU will report its performance. The results and performance of the outputs is therefore linked to the disbursement of both forms of finance mechanism.
42. **Output 1.2:** Financing Facility established within BAGRI and a line of credit to support concessional loans is offered to FOs, women and youth organizations, MSMEs, cooperatives, commercial banks and solar operators to adopt the use of RETs to power the agricultural value chain. Financing Window 2 created and dedicated to loans for solar energy for agriculture/irrigation (funded with GCF loan 2.975 million and BAGRI funds EUR 850,000). For details, see Output 1.1 of Annex 2a.
43. The long-term goal of the Financing Facility is to mainstream adaptation and mitigation in smallholder agriculture into loan terms and credit-scoring systems of financial institutions without concessional backing. It will improve Niger's agricultural lending portfolio by enhancing climate change resilient loans and creating strong incentives for farmers to adopt climate smart practices such as using the climate-smart lending tools developed in Component 2. It is expected that after a 20-year capitalisation period, in which all adaptation activities co-financed by the project reach maturity and PV solar panels for irrigation are operational and increase the resilience of smallholders through better water management techniques, investments will produce a joint co-benefit of -1,204,680 tCO₂eq. See Annexes 11, 12 a and 12 b for the full breakdown of assumptions and methodology of climate calculations for land use change and RETs. As the project is introducing new technologies to the target areas, the baseline is set at zero tCO₂eq for mitigation (land use change and RETs).
44. Currently, BAGRI credit lines for climate-related investments are limited. Although they are considered highly concessional (10% interest rate) in the context of the country, they are still not attractive to FOs, MSMEs, women and youth organizations and cooperatives. They are focused on development actions. Against this baseline, the GCF green lines of credit will incentivize the agriculture sector and the adoption of climate-resilient practices and mitigation measures. Table 4 compares the baseline/business-as-usual scenario with the GCF lines of credit scenario. It should be noted that the lending term for GCF as used below and in the remainder of the document is indicative and the exact level will be agreed on negotiations based on updates on related factors.
45. The Inclusive Green Financing for Climate Resilient and Low Emission Smallholder Agriculture project will benefit from synergies with IFAD operations in Niger, where IFAD's main investment has set up a risk sharing mechanism to improve farmers' access to financing. A similar mechanism will be established for this project in which beneficiaries pay an upfront cost of 10% of the total, while BAGRI lends 50% of the total amount, because of IFAD resources channelled through BAGRI in the form of a matching grant of 40%. Thus, the scheme uses a ratio of 10:50:40 (the methodology to be used is detailed in the PRECIS Project's Implementation Manual). The IFAD portion of the risk sharing mechanism (a grant of 1.7 million EUR) will be defined in alignment with IFAD rules and procedures.

Table 4: Business-as-usual scenario compared with the GCF lines of credit scenario

| Baseline | GCF lines of credit | |
|--------------------------|---------------------|----------|
| Financial Sector – BAGRI | Window 1 | Window 2 |
| | | |

| | | |
|--|---|--|
| <p>Purpose: Finance the agricultural sector and provide various financial products to farmers, agricultural enterprises, traders and processors</p> | <p>Purpose: Strengthen EbA, planning, conservation measures (land restoration, community gardening, non-timber forest tree plantations, restoration of riparian areas, dunes stabilization, sensitive areas management for recreational purposes, etc.) and concrete adaptation measures along agricultural value chains</p> | <p>Purpose: Strengthen, develop and scale up innovative rural electrification model through hybridized solar micro and mini-grids, off-grid solutions, stand-alone systems to power agricultural value chains and multi-purpose water pumps, mills for grinding, hulling and pressing financed by BAGRI conventional investments and window 1</p> |
| <p>Target Group: Smallholder farmers, farmers organizations, SMEs, traders and processors of agricultural products</p> | <p>Target Group: FOs, MSMEs with a focus women and youth, cooperatives, companies, MFIs</p> | <p>Target Group: FOs, MSME, women and youth, MFIs, solar power companies, traders and processors, importers</p> |
| <p>Target Areas: National</p> | <p>Target Areas: Maradi, Zinder, Taouha and Dosso (IFAD target areas) for complementarity and synergies</p> | <p>Target Areas: Maradi, Zinder, Taouha and Dosso (IFAD target areas) for complementarity and synergies</p> |
| <p>Sectors: Agriculture, livestock, poultry, fishery, forestry, agricultural products processing, commerce, vet, irrigation, extension services, land restoration</p> | <p>Sectors: Biodiversity conservation, climate resilient seeds; organic farming, climate information systems and knowledge platforms, adaptation practices and equipment, climate resilient infrastructures</p> | <p>Sectors: renewable energy for agriculture (solar micro and mini-grids, off-grid solutions, stand-alone), enterprise financing (working capital or direct investment) for solar importers, wholesalers, retailers, installers and solar electricity service providers to power agricultural value chains</p> |
| <p>Type of loans:</p> <ol style="list-style-type: none"> 1. Farm operating loans: loans for agricultural campaign (short term, renewed annually through a simple request) 2. Investment loans: For setting up and developing a business or restructuring an agricultural business | <p>Type of loans:</p> <ol style="list-style-type: none"> 1. Direct investment loan for EbA in concretes eligible adaptation measures that lead to income generation and high return of investment 2. Working capital loans for FOs, cooperatives, MSMEs, MFIs working on EbA and adaptation measures | <p>Type of loans :</p> <ol style="list-style-type: none"> 1. Solar loans provided to FOs, cooperatives and MSMEs to invest in solar panel equipment and systems for irrigation, processing, household energy use, etc. 2. Loans to MFIs to on-lend to solar importers, wholesalers, retailers, installers and solar electricity service providers 3. Working capital loans for solar importers, wholesalers, retailers, installers and solar electricity service providers |
| <p>Lending terms: based on each project and assessment of the costs. Repayment is less than one year with an interest rate of</p> | <p>Lending terms: 1% and loan repayment period of less than 2 years Floor loan: USD 1,000 USD and variable ceiling</p> | <p>Lending termsⁱ: 1% and Loan repayment period of less than 2 years Floor loan: USD 1,000 and variable ceiling</p> |

| | | |
|---|---|--|
| <p>10 %. Floor loan : USD 1,000 – variable based deposit</p> | | |
| <p>Eligibility criteria:</p> <ul style="list-style-type: none"> - Be the owner of farmland and / or leased and / or sharecropping\ - Have the required experience and qualifications - Be able to prove sufficient repayment capacity - Have the necessary guarantees - Have a good credit rating with BAGRI | <p>Eligibility criteria:</p> <ul style="list-style-type: none"> - Loan to formal FOs, women and youth organizations cooperatives, MSMEs, MFIs, commercial banks to on-lend - Well-established accounting and financial reporting systems and auditing or having strong potential to shift to this system in short time - Adherence to environmental, social and climate safeguards - Demonstrate willingness to mainstream gender and youth issues (e.g. strategy) - Experience in managing loans - Interventions need to be linked to projected climate change-related impacts on the agricultural sector - Compliance with smart credit scoring tools to be developed under this programme, and adaptation business plan to be submitted by applicant FOs, cooperatives and MSMEs - Targeted beneficiaries must show that they are vulnerable to climate change. | <p>Eligibility criteria:</p> <ul style="list-style-type: none"> - Loan to formal FOs, Cooperatives, MSMEs, MFIs to on-lend, solar importers, wholesalers, retailers, installers, and solar electricity service providers - Well-established accounting and financial reporting systems and auditing or having strong potential to shift to this system in short time - Adherence to environmental, social and climate safeguards - Demonstrate willingness to mainstream gender and youth issues (e.g. strategy) - Experience in managing loans - Interventions need to be linked to projected climate change-related impacts on the agricultural sector - Compliance with smart credit scoring tools to be developed under this project and adaptation business plan to be submitted by applicant FOs, cooperatives and MSMEs - Targeted beneficiaries must show that they are vulnerable to climate change. |
| <p>Baseline: The banking sector is made up of 10 banks and one financial institution and is marked by the high concentration of bank assets: almost 90% of the assets are held by the country's four major commercial banks. Niger's financial system remains weak with a limited number of instruments. Domestic credit accounted for 12.1% of GDP in 2011. Capital market activities are very expensive. BAGRI supports conventional agricultural projects. More recently, the bank has been</p> | <p>Baseline: Various projects have been developed and are being scaled up in Niger, such as community-based adaptation (CBA). Climate resilient practices that have been tested in pilot programmes and demonstrative activities for EBA with funding from GEF or other development partners are also being promoted. Many donors, including IFAD, are financing adaptation measures in agriculture. Projects such as</p> | <p>Baseline: Solar power in Niger and many other African countries is governed by two business models. The first model includes businesses that sell solar systems (for example, lanterns and water pumping systems...) on an over-the-counter (cash) basis. The majority of these companies have to assume short-term, debt-to-finance costs associated with hardware manufacture and transportation (typically from China or for some, Europe). The</p> |

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| <p>partnering with development partners to offer subsidized green lines of credit particularly for energy for agriculture. A few banks, including ORABANK, have set up a credit line from the Agence Francaise de Développement (AFD) for investments in renewable and energy efficiency totalling US\$30 million. The United States Agency for International Development (USAID) is providing a US\$2 million partial credit guarantee to Ecobank for energy efficiency financing. Several bilateral donors are putting in place highly concessional financing schemes that combine grants with credit to promote agricultural and rural finance, working mainly through MFIs and state-linked financial institutions, such as BAGRI.</p> | <p>PRODAF¹³ support the promotion of small irrigation systems as a solution to inadequate irrigation. New projects such as PRECIS will capitalize on this experience and propose solar energy and adaptation to scale up climate resilient interventions. Assisted Natural Regeneration of Trees (ANR) are being integrated into rainfed production systems, crop rotation. Zai half-moon techniques are being implemented in Niger as adaptation measures. Other adaptation interventions include the integration of ANR into rainfed production systems to promote diversification, increase rural household incomes (sale of non-timber forest products and by-products derived from ANR) and strengthen their resilience to climate hazards.</p> | <p>second model offers consumer credit through Pay-as-you-go (PAYG) schemes in which customers pay for the systems in monthly instalments (typically between 12 and 36 months). Solar companies assume the default risk during the payback period. These businesses typically require debt financing that is commensurate with the lending terms that they extend to their customers. Given the fact that companies' revenues are in local currency, the debt instrument needed to support the PAYG type approach will also offer loans in the local currency. Through window 2, the project intends to power relevant activities supported under window 1 in this process. The loan from the GCF will be used through an enterprise financing scheme (working capital or direct investment) offered to solar importers, wholesalers, retailers, installers and solar electricity service providers to power agricultural value chains.</p> |
| <p>Activities currently supported: by BAGRI and that do not contemplate proper environmental, climate and social safeguards: cereal crops which are, in many cases, produced by using slash and burn agricultural techniques; fruit trees; market gardening; fattening of calves and sheep; multiplication of calves and sheep; dairy farming; feed acquisition for livestock and poultry; fishing and aquaculture; poultry farming: acquisition of chicks and fattening of broilers, etc.; manufacture and processing of agricultural products; fruit processing, juice and beverage production; irrigation and water distribution facility; land reclamation and vegetation regeneration activities; forestry/logging; agri-food and dairy industries; leather goods; manufacture of vegetable and animal fats;; sugarcane processing and sugar industry;</p> | <p>Activities to be supported by window 1: Ecosystem Based Approaches (EbA): Business plans that promote local indigenous species, tree species and seeds adapted to future climate change conditions (drought tolerant trees); forest restoration using trees that provide non-timber forest products (shea plants, Nere, etc.) and species (Accacia Seyal, Accacia Nilotica, Accacia Radinia, Commifora Sp, Accacia Albida, Balanites Egyptiaca, Bauhina Rufescens) that offer high economic returns and buffer against the climate change impacts such as floods and desertification; promote woodlots for climate-resilient production of fuelwood to avoid deforestation. Species to be promoted are: Pennisitum sp, Cenchrus bifloris, Adrogon Gayanus, Eragrostis sp, which support riparian habitat restoration.</p> | <p>Activities to be supported by window2: Renewable energy sources (e.g. solar energy for heating, cooling, drying and pumping, small wind turbines and biogas digesters; solar lighting, solar charging, efficient cook stoves). Hybridized multifunctional platform consisting of a mix of diesel engine and solar energy which combines various tools: mills, hullers, alternators, battery chargers, pumps, welding stations, joinery machines. These systems must ease women's work in Niger. Other technologies and equipment are required along the agricultural value chains, such as ones for vegetable gardens (solar water heaters, solar cookers, solar dryers, solar distillers, flat sensors,) for animal production and watering (solar pumps, solar refrigerators for vaccine conservation), solar systems for</p> |

¹³ Programme de développement de l'agriculture familiale (ProDAF)

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| <p>trade in food products; veterinary services; various ancillary activities</p> | <p>These activities will enhance soil infiltration and ground water recharge, reduce surface water runoff, increase water availability in dry seasons and reduce flooding and erosion (through top soil sheet erosion) in the rainy seasons. Greater soil fertility and soil carbon induced by planting nitrogen-fixing species contributes to greater yields and associated financial resources/profit for communities, helping them to cope with climate shocks while sequestering carbon from the atmosphere.</p> <p>Seed banks: Climate resilient seeds promoted and distributed/sold at scale to accommodate increasingly dry seasons associated with the changing climate: Millet: HKP, Zatib and SOSSAT, short cycle of 65-70 days, yield between 500-1,800kg/ha; Cowpea : UT90 (50_70 days), UMA (cycle of 45-50 days); Sorghum : Mota Maradi, IRAT</p> <p>Sustainable livestock: Business plans that promote grazing corridors for livestock as opposed to overgrazing; vaccination and prevention measures against diseases that are aggravated by climate change; development of monitoring and the production of knowledge and applied research systems on pests and diseases that affect crops, livestock and fisheries.</p> <p>Forestry: Firebreaks around forested areas; agroforestry; innovative way to foster stakeholder engagement and awareness and forest monitoring and protection activities, enhance land restoration potential and increasing carbon sequestration.</p> <p>Best climate smart agriculture: Digital solutions on climate change and agriculture; crop rotation, intercropping, cover cropping and agroforestry; slash and mulching, organic composting and planting; Zai contour bunding and vegetative barriers; bio-pesticides and organic farming; reimbursable technical assistance on vulnerable farmers on climate resilient agriculture; training on climate resilient agriculture; integrated pest</p> | <p>multiservice processing, storage, packaging and marketing opportunities. Workshops to progressively promote the adoption of solar systems used in hybridized multifunctional platform to gradually reduce fossil fuels by substituting them with solar power. Solar pumps and efficient irrigations systems to address scarcity and variability of rainfall and particularly during periods of drought while solar processing technologies will reduce the use of firewood.</p> <p>Production: installation of solar water pumping systems for irrigation (all types) to expand the production of staple crops such as cassava, wheat, millet, sorghum and commercial exports, cowpeas and onions beyond the short rainy season as an adaptation mechanism to offset extended dry seasons associated with a changing climate. Similarly, for community vegetable gardens, the project will promote low head distribution solar sprinkler systems or drip irrigation systems in a row connected to solar water pumping systems. Solar pumps will enable farmers to adopt conservation techniques (water micro catchments e.g. Zai or half-moon pits).</p> <p>Livestock production: Installation of solar powered refrigeration for vaccine storage where other sources of reliable electricity rely on fossil fuel use, which is inadequate and costly; installation of solar powered refrigerators for long-term storage. By providing this technology, the project will ensure the climate resilience of agricultural value chains by ensuring that vaccines can be stored for longer periods of time and distributed at convenience, which is especially important during extended droughts, wet seasons, floods and times where</p> |
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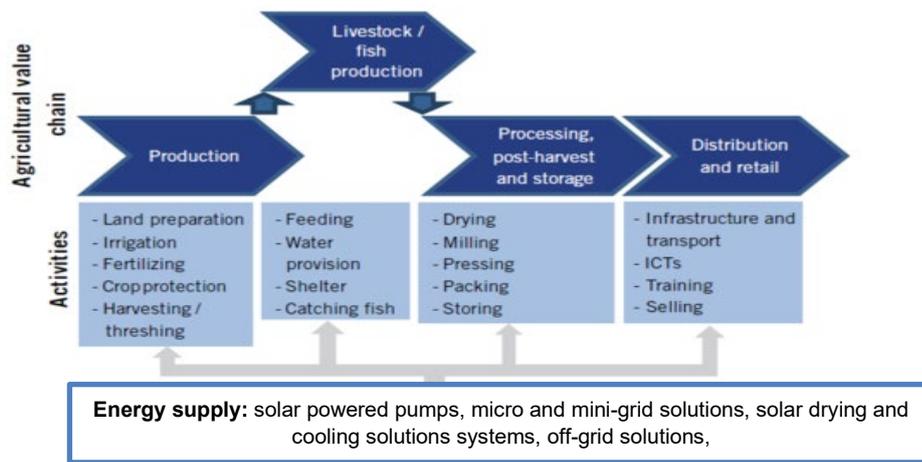
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| | <p>management (e.g. push-pull methods), agricultural half-moons; ANR. These activities enhance soil organic carbon levels and results in improved natural resources increasing community resilience to climate trends.</p> <p>Water infrastructures: (only eligible see Environmental Social Management Plan) Water harvesting infrastructure and tool provision; rehabilitation of degraded lands; water conservation and efficiency measures, efficient irrigation infrastructure, monitoring of dams, flood management and drainage, agricultural insurance, early warning systems (EWS); Equipment and infrastructure to collect information for EWS projects and the meteorological agency and to provide farmers information through text messages; index-based weather insurance initiatives. The implementation of these activities both prolong water availability into dry seasons, thereby reducing negative impacts of drought, and enhance water infiltration and flow control mitigating risks of flooding in intensified wet seasons.</p> | <p>market access is not guaranteed.</p> <p>Processing, post-harvest and storage: depending on the commodity, installation of solar powered technologies such as solar collectors; integral collectors storage for heating water, solar powered fans, solar powered ventilation; packaging, cooling and cold storage, hybrid backup generator, photovoltaic (PV) powered evaporative cooling; solar chiller, solar powered packing house; distribution and retail: solar powered tricycles/truck and solar powered shops and refrigerators.</p> <p>Provision of milk canisters to keep milk cool. New systems use PV panels, a commercially available, direct current (DC) freezer equipped with a smart control unit and two insulated milk cans with a 30 litre capacity, introduction of solar powered milk cooler comprised of a milk cooling tank, condensing unit, solar milk pump, solar PV panels, inverter, battery bank, electrical and control panels and smart level heater. The window will also target the installation of solar panels with storage batteries system to power the fish storage facilities along the Niger River with renewable energy sources.</p> <p>By providing this technology, the project will improve the climate resilience of agricultural value chains. In extended droughts, floods and periods in which market access is not guaranteed, ensuring that produce can be stored for longer periods of time and distributed at convenience is crucial.</p> |
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46. **The IFAD-BAGRI cost-sharing mechanism** is to facilitate business plan holders' access to BAGRI loans. IFAD resources will be provided in the form of a matching grant (40% of the total loan), thus serving as a long-term deposit that BAGRI clients can access once they have fully paid back their 50% loan contract with BAGRI. A similar methodology will be described in the GCF project PIM, which will be developed prior to implementation. Through this mechanism, the IFAD grant helps to cut BAGRI interest rates by half, as risk is reduced.

| Criteria | Evaluation | Possible points |
|--|---|-------------------------------------|
| EBA: | Business plans that promote local indigenous species, tree species and seeds adapted to future climate change conditions (drought tolerant trees); forest restoration with trees that provided non-timber forest products (shea plants, Nere, etc. and species (Accacia Seyal, Accacia Nilotica, Accacia Radinia, Commifora Sp, Accacia Albida, Balanites Egyptiaca, Bauhina Rufescens) that offer opportunities to earn high economic returns and serve as a buffer against the impacts of climate change such as floods and desertification. Promote woodlots for climate-resilient production of fuelwood to avoid deforestation. Species to be promoted are: Pennisitum sp, Cenchrus bifloris, Adropogon Gayanus, Eragrostis sp, which support riparian habitat restoration; the recovery of degraded agricultural land through techniques of soil and water conservation (improved Zais, agricultural half-moons, assisted natural regeneration). | To be further defined year 1 |
| Seed banks: | Climate resilient seeds being promoted and distributed/ sold at scale are for: Millet: HKP, Zatib and SOSSAT, short cycle of 65-70 days, yield between 500-1800 kg/ha; Cowpea : UT90 (50-70 days); UMA (cycle of 45-50 days); Sorghum: Mota Maradi, IRAT | To be further defined year 1 |
| Sustainable livestock: | Business plans that promote grazing corridors for livestock; vaccination against diseases and prevention, develop monitoring and the production of knowledge and applied research systems on pests and diseases that attack crops, livestock and fisheries | To be further defined year 1 |
| Forestry: | Firebreaks around forested areas; agroforestry; innovative ways to foster stakeholder engagement and awareness and forest monitoring and protection activities | To be further defined year 1 |
| Best climate start agriculture: | Digital solutions on climate change and agriculture; crop rotation, intercropping, cover cropping and agroforestry; slash and mulching, organic composting and planting Zaï; contour bunding and vegetative barriers; bio-pesticides and organic farming, reimbursable technical assistance on climate resilient agriculture; training on climate resilient agriculture; integrated pest management (e.g. push-pull methods); | To be further defined year 1 |
| Climate resilient infrastructures and technologies | Water harvesting and infrastructure, storage of seeds, tools; rehabilitation of degraded lands; water conservation and efficiency | To be further defined year 1 |

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| | measures such as water harvesting, efficient irrigation infrastructure, checking dams, flood management and drainage, agricultural insurance/EWS: Equipment and infrastructure to collect information for EWS projects and the meteorological agency and index-based insurance | |
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Figure 6: Inclusion of energy along agricultural value chain



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| Energy management | <ul style="list-style-type: none"> ✓ Installation of solar-powered water pumps for irrigation systems ✓ Installation of solar-powered refrigeration systems for vaccine storage ✓ Installation of solar-powered refrigerators/canisters to keep milk cool for processing, post-harvest and storage ✓ Installation of solar power collectors and storage for heating water, fans, ventilation, packaging houses, cooling and cold storage, hybrid backup generator (50% renewable), PV powered evaporative cooling systems; solar chiller and packing house ✓ Solar-powered tricycles/truck and solar-powered shops – refrigerators |
|-------------------|---|

Climate Smart Credit Scoring tool:

47. The tool will be set up to assess the supported activities listed in table 4 above. A five-point scoring system will be created to guide risk assessment of each of these activities, which will strengthen decision makers' capacity to more accurately evaluate risks in their lending portfolio.

Criteria for loan approval:

48. Preliminary investment criteria of business plans to be funded by BAGRI will need to contribute to the outcomes of this proposal and track the relevant outcome level indicators reviewed by BAGRI. These evaluation criteria will be fine-tuned during year one of the project.

Eligibility criteria for MSMEs, FOs, cooperatives, community-based organizations, women and youth organizations, MFIs:

- Ability to deliver community projects, which includes the institutional, technical and financial capacity necessary to manage projects;
- Previous experience in designing and implementing community projects and records of past activities on climate resilient agriculture;
- Guarantee of community participation in project design, implementation, monitoring and evaluation;
- Good knowledge of EbA, agroforestry systems, landscape resilience, food security, climate resilient infrastructure and sustainable livestock practices.

Eligibility:

- Target organization (as highlighted above) must be undertaking activities in the project's target areas.
- These organizations must demonstrate their credibility and track record in the areas of environmental sustainability, loans management and climate change;
- Interventions must fall strictly within the areas of intervention identified for window 1 and window 2;
- Climate smart scoring is completed;
- Registered national institutions (working on environment and green economy, climate change) and scientific research organizations are not eligible to be sub-borrowers; they are eligible to be technical assistance providers to eligible sub-borrowers (FOs, MSMEs, cooperatives, MFIs and commercial banks). They must be selected by the main eligible sub-borrowers for the purpose of the technical assistance under component 1 and component 2. For the avoidance of doubt, they will not receive IFAD and GCF money.

The project will not support excluded activities as presented in the IFAD's Social, Environmental and Climate Assessment Procedures (SECAP).

Eligibility criteria and commercial terms for both the lending facility (Component 1) and Grant Awards (Output 3.1) will be included in the Term Sheet.

49. **Output 1.3:** Two lines of credit - 1.1.1 and 1.1.2 – set up with funds from GCF Grant. A consultant will be hired to provide technical assistance to BAGRI on setting up the two functional lines of credit.

50. **Component 2: Capacity-building and technical assistance for BAGRI, FOs, cooperatives and MSMEs (GCF Grant - administrated by RoN):** This component seeks to improve technical and business development skills, which are key to removing barriers to financing adaptation and mitigation. Aiding BAGRI and other MFIs to enable lenders to provide climate-smart loans to smallholders including women and youth and ultimately will reduce the climate risk of loan portfolios. Under this component, the RoN, through the Ministry of Finance, will support BAGRI in implementing all related capacity-building activities through its IFAD-funded coordination programmes¹⁴. No objection requests will be sent to IFAD for approval prior to implementing each activity, but the overall decision lies with the RoN.

51. Capacity-building activities will be focused on the readiness and ability of FOs, cooperatives and MSMEs to understand climate threats and to identify and develop business plans that are eligible for financing under each line of credit. A particular emphasis will be placed on building women and youth organizations' capacities on business plan identification and development. Technical assistance will be provided to FOs, women and youth organizations, cooperatives and MSMEs to develop a catalogue of the best adaptation and mitigation solutions available in country and the region. It will provide support for monitoring the results and understanding of the operationalization of the project. To do so, inception workshops will be organized with all FOs, women and youth organizations, cooperatives and MSMEs operating in the targeted areas to discuss execution and implementation mechanisms.

52. A start-up workshop will address: the definition of indicators, M&E systems, safeguards, youth and gender action plans, annual work plans (AWPs) and the Project Implementation Manual. Institutional and regulatory frameworks and planning on renewable energy will support knowledge sharing and capitalization on and dissemination of lessons learned. Extending the project's impact and its replication will be done through national renewable energy planning and strategies from Agence Nationale d'Energie Solaire (ANERSOL) and sector ministries (ministries of energy, environment and agriculture, economy and finance). This will also contribute to the improvement of institutional and regulatory frameworks at national levels so that the price of renewable energy can be lowered over time. In addition to the start-up workshop, training on specific thematic areas will be organized to build the capacity of FOs, women and youth organizations, cooperatives and MSMEs. The areas include financial literacy and education; management and business development, how credit unions (CUs) and MFIs' can increase smallholder producers' savings capacity and how to enhance their skills to make good use of these products through financial education. FOs, cooperatives and

¹⁴ IFAD-Funded Coordination Programme is a programme-based approach in which a single national coordination unit, with the support of decentralized units in the targeted regions, oversee and coordinate all IFAD funded projects (PRODAF, PRODAF Extension, upcoming PRECIS, GEF project). PRECIS: The IFAD investment project entitled "PRECIS" in Niger will be presented to the September EB. The GCF funding proposal is meant to fill a financing-gap for PRECIS by pioneering green financing.

MSMEs with male dominance or with few youth representatives will also be encouraged to increase the active participation of women and youth within their membership and in their decision-making instances, policy/advocacy, technical and economic services and lending services. Outputs to achieve these results are:

53. **Output 2.1:** FOs, women and youth organizations and/or cooperatives and MSMEs', including solar operators (disaggregated by gender and youth), capacities to design business plans, access green lines products from BAGRI and other MFIs and commercial banks and implement diversified, climate resilient livelihood options strengthened. For a detailed description of activities, see Log Frame in Annex 2a. Based on a EbA, the proposed project aims to restore 21,252 ha of degraded forest areas: 9,252 ha in Dosso, 3,300 ha in Tahoua; 3,900 ha in Maradi and 4,800 in Zinder. It also strives to increase the yields of the following crops: millet, sorghum, cow pea, cassava, sweet potato, rice, maize, wheat, fonio (finger millet), groundnut and cotton), while intercropping cereals with legumes or cereals and cereals, shea butter, nere and baobab. The GCF ESMF provides actions and interventions to enforce the safeguards particularly on risks related to irrigation and water mobilization for irrigation from groundwater and surface water. Additionally, there is a plan and a budget for the close monitoring of activities, with special focus on the use of water against the water balance in the irrigation sector. The ESMF will be implemented by the PMU to ensure sustainable water management use.
54. **Output 2.2:** Improved readiness and capacities of BAGRI, MFIs and MFI partners to seize market opportunities for lending to FOs, women and youth organizations, cooperatives and MSMEs that invest in low emission and climate resilient agriculture. Technical assistance on green lending and climate risk management, financing sustainable water management and related energy technologies to mobilize water for sustain production.
55. The technologies and equipment required along the agricultural value chains are: for vegetables production (solar water heaters, solar cookers, solar dryers, solar distillers, flat sensors,) , production and watering animals (solar pumps, solar refrigerators for vaccine conservation, etc.). Additionally the project will support installing solar power systems for multi-services processing, storage, packaging and marketing opportunities. Solar system for hybridized multifunctional platform¹⁵ for workshops will gradually reduce fossil fuel use. Solar pumps and efficient irrigations systems are needed to address scarcity and variability of rainfall, particularly during periods of drought, and solar processing technologies will reduce the use of firewood. This will be carried- out through the implementation of technical assistance conducted by consultants and specialists on governance, management and policy. Specialists will also aid in the creation of a package of tools and instruments to better identify investment risk and increase awareness and training in climate smart agriculture practices. For a detailed description of activities, see Log Frame in Annex 2a.
56. **Output 2.3:** Improved policy dialogue, government technical and institutional capacity, advocacy, training, knowledge management, information dissemination and stakeholder management through the organization of round tables and events with special emphasis on the specific issues that women and youth face. Other activities include: the production of ten policy briefs and five publications and catalogues for decision makers; the organization of South-South and triangular cooperation tours to share experiences with projects similar to the AFD GCF project on financing systems or its Productive Investment Initiative for Adaptation to Climate Change (CAMBio II) in Latin America; and the dissemination of lessons learned through the creation of a databank containing information on innovative projects. There is a readiness option that can be explored (for a detailed description of activities, see Log frame in Annex 2a). This output will promote a transformative approach and a feedback loop for scaling up these investments in the future through engagement with the government and capacity-building, advocacy and training of national institutions on the economic development objectives associated with the financing windows.
57. Furthermore, the project will promote knowledge management, information dissemination and stakeholder engagement through the creation of solution-oriented platforms databank that contains information on innovative projects for high-level policy dialogue between, FOs, banks, MFIs and government authorities (national and local). Additionally, this output will promote strengthened government technical and institutional capacity to promote green financing EbA and climate-resilient agriculture and enhance the

¹⁵ Hybridized multifunctional platform: Consisting of a diesel engine, the multifunctional platform combines various tools: mills, hullers, alternators, battery chargers, pumps, welding stations, joinery machines and ease women labor in Niger.

awareness of the FOs, cooperatives, MSMEs and MFIs. The project will also organize high-level and technical events and develop a platform for exchange between value chain actors and financial institutions.

58. To support stakeholder engagement and capacity-building on green lending, a stakeholder engagement plan will be developed and implemented. A regulatory framework will be designed to ensure the promotion, regulation of and support for the system beyond the project's life cycle.
59. **Output 2.4:** Increased number of women and youth entrepreneurs engaged in EbA, renewable energy use and climate resilient agriculture, including at various decision-making levels along the agricultural value chain. The activities to be conducted include: training on financial literacy, natural resources management decision-making, labour saving and cost-competitive technologies for developing vegetable gardens, agroforestry and gender-related studies to orient decision-making. Women will also be represented in the decision-making processes. Clients' business plans will be reviewed to ensure that measures are adopted to close the gender gap in agriculture and leadership programmes will be organized to ensure that women are provided better access to productive assets and credit (for a detailed description of activities, see Log Frame in Annex 2a).

Component 3: Incentive scheme to encourage MFIs, FOS, cooperatives and MSMEs to adopt adaptation and mitigation measures. (GCF and IFAD grants, administrated by RON)

60. **Output 3.1:** The Sahel Award programme is operational. This award consists of i) an Annual Sahel Award incentive in the form of a debt cancellation to promote sustainability in smallholder agriculture and ii) an institutionalized annual award ceremony. The Award will cancel a maximum of EUR 8,500 of debt on top of the loan principal granted under both windows in Component 1 and will be awarded to the five best projects submitted during the year under each window. The administration of the prize will be carried out as follows: EUR 4,000 will be cancelled at the time of selection; EUR 3,000 at the time for the mid-term review; and EUR 1,500 once adaptation/mitigation measures have been successfully implemented and monitored. As administrator of the award, the RoN will hold the right to revoke the debt forgiveness to recipients that do not comply with original terms at a mid-term review. The Sahel Award trophies will be given to the selected beneficiaries and the distinction will be considered as collateral when applying for additional loans from BAGRI. The RoN, through the Ministry of Finance, will administrate these resources. IFAD and BAGRI will review applications and make recommendations to the RoN based on their expert opinion. The award selection committee will be further detailed in the manual of implementation, but decisions will remain with the RoN. Measures will be taken to ensure that among the winners of the award, 45 percent are MFIs, FOs, cooperatives and MSMEs led by women and 55 percent are led by youth (see table below). The Annual Sahel Award Ceremony will be organized to honour changes in attitudes and the best adaptation and mitigation projects and initiatives developed at the national level by MFIs, FOS, cooperatives, women and youth organizations and MSMEs. A Sahel Award Trophy will also be designed.
61. **Output 3.2:** Women and youth incentivized to implement climate adaptation and mitigation measures and RET in agricultural value chains. The project will specifically target women and youth as they are the more vulnerable societal groups to climate change. Targeting will be carried out according to the breakdown and definitions below.

| | FOs | Cooperatives | MSMEs | MFIs | TOTAL |
|------------------|-----|--------------|-------|------|-------|
| Women led | 10% | 15% | 15% | 5% | 45% |
| Youth led | 15% | 15% | 20% | 5% | 55% |

Definition of women led: project approved by BAGRI and managed by a female.

Definition of youth led: project approved by BAGRI and managed by a youth (18-35 years old).

General Definition of MSMEs

In this project, the definition for MSMEs proposed is described in table 5 below:

Table 5: Variables for defining MSMEs in Niger

(Classical definition with further mapping on all existing MSMEs in the field)

| Category | Quantitative Aspects |
|----------|----------------------|
|----------|----------------------|

| | |
|---|---|
| Medium enterprise | Employs between ten to 100 people; subscription to the chamber of commerce, internal accounting annual profit above 50 million FCFA but not exceeding 500 million FCFA, minimum investment of 10 million FCFA |
| Small enterprise | Employs between four to ten people; subscription to the chamber of commerce, internal accounting annual profit above 10 million FCFA but not exceeding 50 million FCFA, minimum investment of 1 million FCFA |
| Very small and micro enterprises | Employs between one to three people; subscription to the chamber of commerce, internal accounting annual profit not exceeding 10 million CFA |

Source: Boukari Al Moustapha al., 2016.

Since the project targets youth and women led MSMEs, the following additional primary criteria will be applied during the selection process (in addition to those listed in table 5). They will be refined during the first year of implementation when the project is finalizing the selection criteria.

62. Eligibility criteria for women led MSMEs:

- A formally registered agribusiness enterprise of which more than 51% of the firm's assets or shares are owned by women. This will be assessed and validated based on firm registration information and women's share of profits
- Women represent at least 30% of the Board of Directors or in senior management positions
- Minimum firm size of three employees, of which 60% are women
- Activities are mainly carried out along the agricultural value chain
- Track record of loan repayments
- Operational bank account open for more than two years
- Records and bookkeeping up to date
- Agriculture land holding of between two and ten ha
- Any other characteristics deemed necessary by the FIs.

63. Eligibility criteria for youth led MSMEs:

- A formally registered agri-business enterprise of which more than 51% of the firm's assets or shares are owned by a youth (18-35 years old). This will be assessed and validated based on the firm's registration information and youth's share of profits.
- Youth represent at least 30% of the Board of Directors or employees in senior management positions;
- Minimum firm size of about three employees of which, 60% are youth
- Activities are mainly carried out along the agricultural value chain;
- Track record of loan repayments
- Bank account operational for more than two years
- Records and bookkeeping
- Agriculture land holding of between two and ten ha
- Any other characteristics deemed necessary by the FIs.

64. Two-thirds of the workforce in rural areas are women. For both women-led and youth-led MSMEs, the definitions are adapted from the generic definition of MSMEs (Boukari Al Moustapha al. 2016) with set targets to promote gender and youth empowerment and better access to loan from BAGRI. The definition is similar to what MFIs use to define eligible MSMEs for credit. Women-led agricultural cooperatives including youth and women organizations will be eligible. The project will conduct a baseline study on the women and youth-led MSMEs with the Chamber of Commerce to better to adjust the selection criteria during the finalization of the implementation manual. Under the capacity-building component, training will be provided to support women and youth's efforts to organize themselves into formal organizations and MSMEs.

65. **Definition of Farmer-based organizations (FBOs):** the organization has a defined membership, purpose for assembling and organizational structure, which has been established to support members in pursuing individual and collective interests. They may differ in their: scale of memberships (national federations to

local associations); function (policy, advocacy, economic, technical and/or local development); legal designation (registered cooperatives and registered clubs, groups, associations), among other characteristics. In Niger and the region in general, they combine their forces to improve bargaining and negotiating power, particularly pricing, achieve economies of scale, enhance quality control and access to financing and markets. The criteria for selecting FBOs will be the same as for the MSMEs described above.

The grant will be used as an incremental fund to reach the total investment requested by clients. Eligibility criteria for the Sahel-Awards will include :

- The FBO must present an endorsed business plan
- It must have received a loan via Component 1 (either window 1 or window 2)
- The selected adaptation or mitigation activities have the greatest impact among all approved business plans
- It must comply with safeguard requirements and have the potential to generate the biggest economic and social impacts on a larger group of beneficiaries.
- It must comply with smart credit scoring tools.

66. This incentive will be replenished through strategic partnerships with other partners interested in promoting sustainable and climate resilient agriculture. For this project, The Republic of Niger's definition of farmers' organisations, cooperatives, MSMEs and MFIs will be used at the time of the submission of request for loans or grants. This will be defined in the protocols to be developed. In case the clients do not meet the criteria for the Sahel Award, the unused grant will be kept to support successful business plans presented the following year. In case these resources are not used for three successive years, the grant could be used to support MFIs that have submitted capacity-building activities that contribute to greening their lending portfolio.

Project and Knowledge Management

67. **Project Management Unit (PMU)** will be established within BAGRI. The PMU will ensure: (i) efficient coordination, monitoring and evaluation of project activities linked to the loan; and (ii) stakeholder awareness and participation through timely and transparent communication of results and consistent citizen engagement. The PMU will be headed by a Project Manager (with demonstrated capabilities as a climate adaptation specialist on how to implement low emission and climate resilient agriculture, EbA approaches and energy for agriculture). The following key project staff will support them: finance manager, environmental specialist, targeting gender and youth specialist and M&E specialist that will also provide administrative support to the PMU and other partners. The overall work of the PMU will be subject to the decision-making and approval authority of RoN through the Ministry of Finance.

68. The GCF project grant component will be administrated by the Ministry of Finance under a single implementation structure. This single implementation structure has its technical, administrative and financial support for the planned activities in selected regions and, a National Representation and Technical Assistance Unit (CENRAT), formerly known as the "National Technical Assistance Cell (CeNAT) of ProDAF" whose role has been reviewed and approved in IFAD projects. This management structure will also be utilized in the supervision and monitoring of the GCF component across the regions, in coordination with the GCF PMU within BAGRI.

Monitoring and Evaluation (M&E), please see M&E section below. Desegregation of data by gender and age.

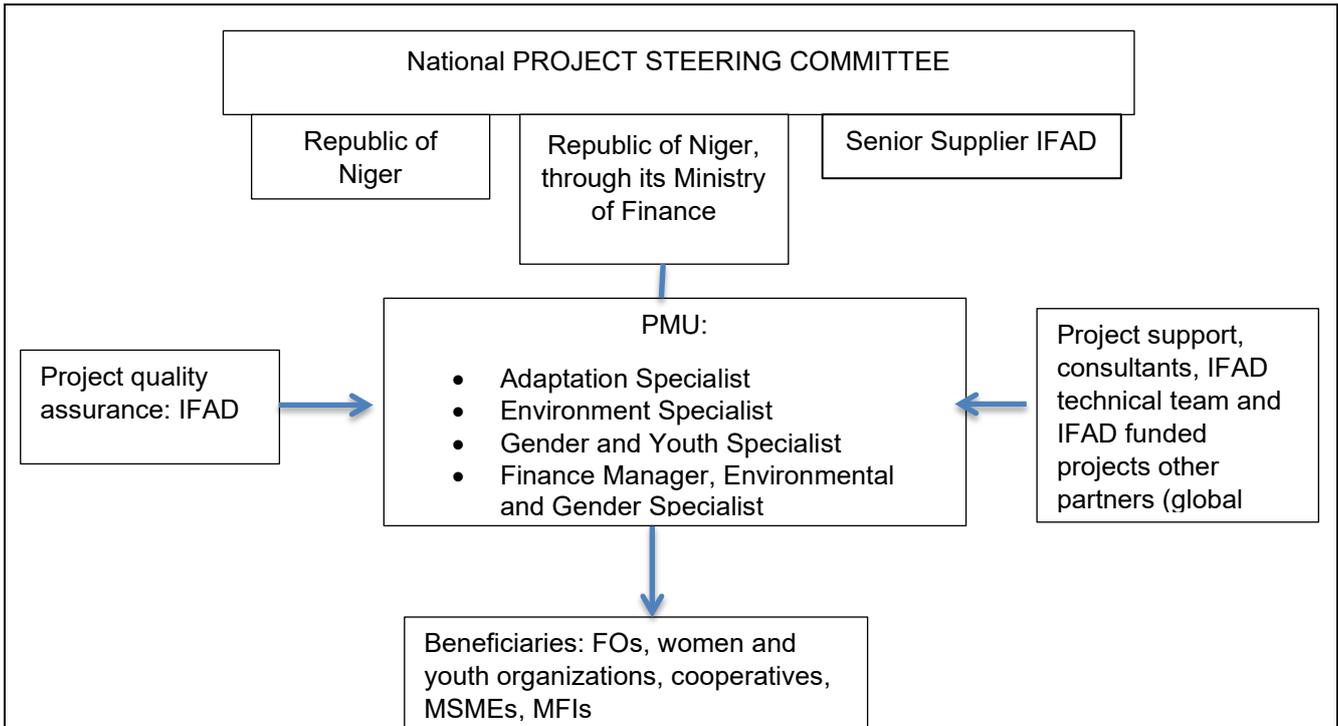
B.3. Implementation / institutional arrangements (max. 750 words)

69. The Project aims to provide competitive financing options to MFIs, FOS, women and youth organizations, cooperatives and MSMEs that are promoting low emission and climate resilient smallholder agriculture in Niger. Considering the current sector expertise and market reach, IFAD shall facilitate this. GCF's line of credit shall be the key source of financing for the project, with co-financing from IFAD and BAGRI. As the AE, IFAD will channel GCF funding through the Republic of Niger which will channel the funds to BAGRI. BAGRI shall provide sub-loans to MFIs, FOs, cooperatives and MSMEs in the local currency (CFA) at a concessional rate of 1%, which represent BAGRI's management costs to deploy the funds to end users (which is lower than the current 10% interest rates offered). As the GCF loan is in Euros and the local currency is pegged to euro at a fixed rate of 1 Euro=655 CFA, forex risk is minimal. The final conversion fee will be applied at the approval stage. Sub-loans will be distributed under two windows of an established Financing Facility (see section B2) after detailed technical, financial and economic due diligence for the

project and the developer is followed. The RoN will assume the credit risk vis-à-vis the GCF and IFAD. The RoN will repay the principal of the GCF loan in EUR to IFAD within a period of 40 years and with zero interest rate, irrespective of the performance of the downstream sub-loans advanced by BAGRI in local currency. Prior to the sub-loan disbursement, all scoring tools will be developed. A detailed project monitoring evaluation and reporting procedure will be prepared to address potential issues during execution of the project. BAGRI through its extensive networks in the country, with the support of IFAD, would ensure necessary monitoring and detailed project progress and financial reporting.

70. As described in section B2, the Project Management Unit (PMU) is hosted by BAGRI and will become climate and environmental finance unit or department after the project ends. The PMU will facilitate (i) efficient coordination and monitoring and evaluation of project activities under the loan proceeds and (ii) stakeholder awareness and participation through timely and transparent communication of results and consistent citizen engagement. The PMU will be headed by a project manager (with demonstrated capabilities as Climate Adaptation Specialist on how to implement low emission and climate resilient agriculture, EbA approach, energy for agriculture) supported by the following key staff: a finance manager, an environmental specialist, a targeting, gender and youth specialist and a M&E specialist. In addition to the key project staff, the following additional staff will support the PMU and other partners: admin officer and finance officer, assigned by BAGRI, which will provide administrative and financial management support, respectively. This will be funded by the project management costs. To ensure synergies with BAGRI operations, a finance officer from the Bank will be seconded to the PMU.
71. The Project Manager is responsible for overall project coordination and management, preparation of annual work plans, project risk monitoring and reporting on project progress and financial management¹⁶ to IFAD and the RoN, represented by the Ministry of Finance. An M&E officer/grants officer will be responsible for monitoring, regular progress and reporting as well as ensuring compliance with environmental and social safeguards (ESS) and for supervision and management of the GCF loan proceeds. Independent mid-term and final evaluations will be carried out by independent consultants. The PMU of the GCF project will work closely with the single coordination unit in charge of the overall supervision of all IFAD funded projects at country level to achieve the expected outcomes. During the first year of implementation of the project, the PMU will be trained on understanding climate threats, developing climate financial products, promoting renewable energy for agriculture and on green lending and climate risk management. With enhanced capacity, BAGRI will provide technical assistance to MFIs on green lending. Strategic partnerships will be developed with other similar initiatives supported by AFD and the Global Climate Lab with the Climate Smart Lending platform.
72. A National Project Steering Committee (NPSC) will be established to provide oversight, direction and guidance for project implementation, and in particular, approve the project's AWPB and its periodic progress reports. The NPSC will be formed by the RoN, which will designate the relevant key partners to be part of the NPSC key stakeholders. These include BAGRI, the Ministry of Agriculture, the Ministry of Forestry and representatives of MFIs, ANERSOL, IFAD, FOs and MSMEs. Any recommendation or measures adopted by the NPSC are subject to final approval by the Executing Entity, which is represented by the RoN.

¹⁶ IFAD **financial reporting** format and timeline will be used to allow IFAD to receive the necessary information on time to report back to GCF.



Roles, responsibilities and reporting lines:

73. **IFAD:** As Accredited Entity (AE), IFAD will administrate the transfer of GCF resources to Republic of Niger, and provide oversight and implementation support and ensure quality. Both the GCF loan and grant proceeds will be passed by IFAD to the RoN under a single agreement. For this purpose, IFAD has robust fiduciary and technical oversight and quality assurance systems, which will be closely supporting the RoN and its partners (BAGRI), the Ministry of agriculture for the project implementation. IFAD will provide bi-annually financial reports and report annually to the GCF on the overall implementation of the projects based on quarterly reports from the RoN received from the PMUI. Every year, an Annual Work Plan and Budget (AWBP) will be developed and shall include BAGRI and IFAD co-financing and synergies with the IFAD baseline investment. This AWBP will be validated by the Steering Committee chaired by the RoN through the Ministry of Finance and to which IFAD will participate in the committee as an observer. To channel GCF resources, IFAD and RoN will enter into a sovereign loan agreement, which will also govern the use of the grant proceeds. The Ministry of Finance representing the RoN will manage the grant portion with the exception of 60,000 USD of the grant that will be used to set up the two credit lines under component 1 (activity 1.1.3). This will be managed by BAGRI through approvals by the Ministry of Finance as the decision making entity. IFAD will provide its no-objection (final decision with the RoN) to all activities related to the grant portion over a certain threshold or type of activity as to be specified in IFAD's Letter to the Borrower which sets the grant and loan administration arrangements. IFAD will also facilitate the hiring of experts to refine and support the implementation of the SAHEL AWARD, including the eligibility criteria and decision-making framework for the award. Necessary financial and operational reports will be transmitted in a timely manner to IFAD to meet GCF reporting requirements

74. **The Republic of Niger**, represented by the Ministry of Finance, is the only Executing Entity (EE) and will be the recipient of the GCF financing and guarantee the repayment of the GCF loan with zero interest. The RoN proposes to enter into an on-lending agreement with BAGRI. IFAD will review the terms and conditions attached to this agreement with the RoN only in regard to the GCF loan proceeds.

75. The Republic of Niger, through the Ministry of Finance, will also ensure that the GCF loan is repaid according to the agreement and lending terms thereof of the GCF. In that regard, the RoN, as the borrower of the GCF loan, will make payments to IFAD irrespective of the performance of the sub-loan portfolio to be managed by BAGRI. Moreover, IFAD will disburse to the RoN funds in EUR and the RoN will make payments to IFAD in EUR. The RoN will facilitate a regulatory framework under which green lines would continue to be promoted, regulated and supported beyond the project's lifetime. Since 1979, IFAD has been

working as the AE and has funded 12 projects in Niger with a total approved cost of USD 556,457,303. These projects have directly benefited 1,023,200 households. .

76. In its role as EE, the RoN will channel GCF grant proceeds and make decisions on the use of the grant with no-objection from IFAD for components 2 and 3. A designated GCF line of credit for low emission and climate resilient smallholder agriculture bank account will be created to receive these resources. IFAD will provide technical support to the RoN in the implementation of each of the activities.
77. **BAGRI** is a state-owned bank created on 20 July 2010 with a capital of 10 billion FCFA. The RoN holds 57.8 per cent of its capital; private entities, 25%; Sonibank, 4.96%; and other shareholders own 11.4%. BAGRI (or “the Bank”) started its activities in 2011 with the mission of establishing a system of financing the agro-pastoral sector that combines social and development objectives to its financial and performance objectives, including the fight against food insecurity. Its target groups are promoters of family-owned businesses, transhumance companies, subsistence farming and agribusinesses. Its intervention strategy combines the geographical coverage of the national territory with relations with farmers' organizations and other strategic partnerships at national and international level. In 2018, as part of the implementation of its business plan and its local banking policy, the Bank continued to extend its network to 24 agencies distributed among urban and rural areas located across the country. It is, therefore, the most extensive network in Niger. BAGRI applies the lowest interest rate in the market (10%), compared to other commercial bank, where interest rates are at 12%.

Investment portfolio

| | | |
|---------------------------------|--|-----|
| Individual producers | Individuals/groups of producers; Groups of producers for the credit | 32% |
| Cooperatives | Increase inclusion of producers in key value chains and value added | 18% |
| Agro-pastoral enterprises | Markets | 17% |
| Decentralized financial systems | Smallholder farmers | 20% |
| Local municipalities | Financing up front deposit by local municipalities so they can access to matching grants | 12% |

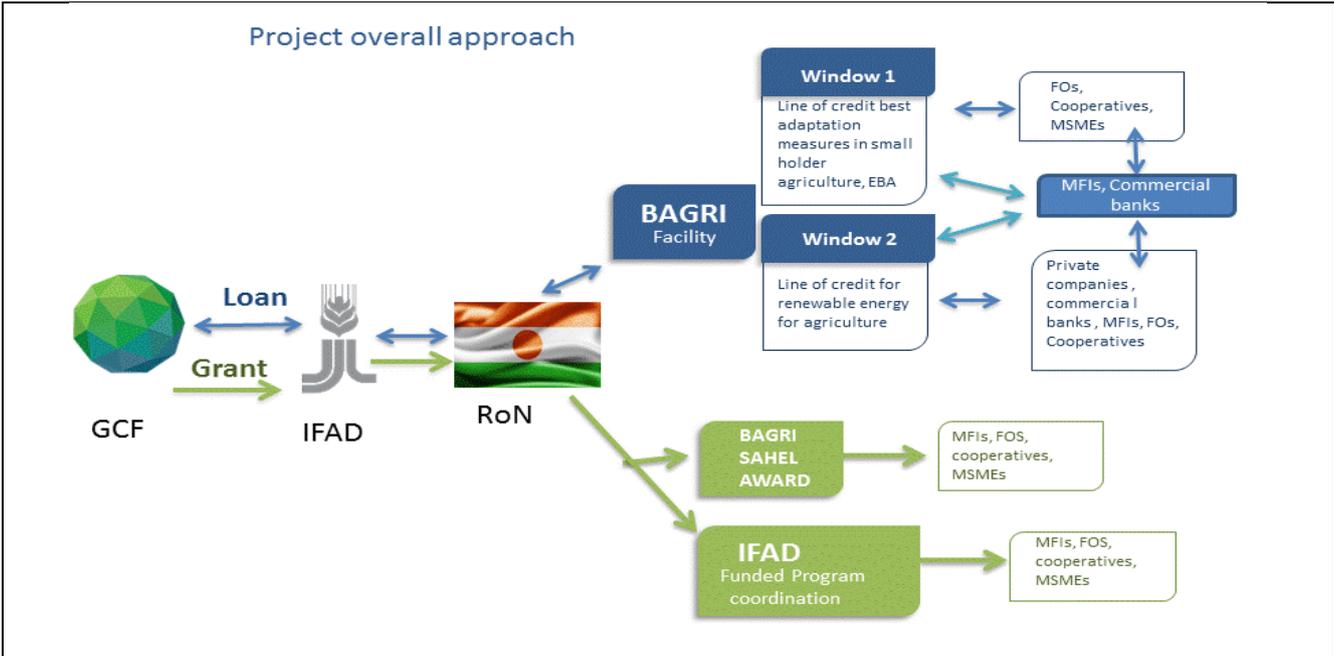
78. The Bank will report to the RoN and IFAD (through the PMU) on the implementation of the project activities in a format to be established by IFAD. It will be responsible specifically for submitting quarterly reports on the disbursements of the Financing Facility. Financial statements (balance sheets, income statement) prepared in accordance with internationally accepted standards, GCF loan portfolio quality reports and emission reduction data will be regularly monitored and reported by the M&E specialist in the PMU and other operational reporting provided in line with IFAD's standard procedures.
79. BAGRI and the RoN will enter into an “on-lending agreement” that specifies in detail BAGRI's obligations to enable the RoN to ensure compliance with GCF obligations attached to GCF Proceeds. For MFIs that will access credit from BAGRI, the Bank will contractually require measures to ensure that the MFIs (and any other sub-borrower that will perform further on-lending) apply and comply with the eligibility criteria and guarantee that GCF concessionality will be passed down to the final sub-borrowers. The GCF PMU will work closely with Single coordination unit in charge of the overall supervision of all IFAD funded projects at the country level. Quarterly reports will be provided to IFAD regularly in line with administrative arrangements established and during supervision missions; BAGRI will be responsible for the monitoring of overall project performance.
- **Component 1:** in regards to the loan component, IFAD will channel the GCF loan (5, 950,000 EUR) to the Republic of Niger based on the GCF loan/grant agreement. IFAD will submit withdrawal applications to the GCF to ensure that it has sufficient resources to meet project liquidity requirements. Only the loan component will be pass to BAGRI by the RoN;

- **Component 2 and 3:** the RoN, as EE, through the Ministry of Finance, will administer the GCF grant (2,550,000 EUR) and disburse the relevant portion of the grant to support BAGRI according to the work plan and project document. In consultation with BAGRI, IFAD will support RoN by having its country project teams mobilise the technical expertise necessary to support the implementation of outputs 2.1, 2.2, 2.3, 3.1 and 3.2. IFAD will submit withdrawal applications to the GCF to ensure that it has sufficient resources to meet project liquidity requirements. No objection requests are submitted to IFAD prior to the implementation of each activity under the grant component.

80. With regard to the Sahel Award, the Ministry of Finance will provide technical assistance for the overall implementation of the project. IFAD will also provide implementation support and technical assistance in coordination with BAGRI.

Flow of funds

81. IFAD will provide the GCF proceeds in Euros to the RoN which will on-lend the GCF loan resources to BAGRI. BAGRI will on-lend in local currency to clients based on the criteria described above. The RoN will sign an on-lending agreement with BAGRI to establish the facility in which the GCF loan (5,950,000 EUR) will be deposit. With regard to the IFAD grant (1,700,000 EUR) and funds for BAGRI (850,000 EUR), these resources from the agreed cost sharing mechanism have been earmarked to implement all eligible activities under the GCF initiative (letters of financing). Separate reconciliations will be maintained for the different funding sources and each earmarked resource. For the repayment of the loan, the RoN will make the repayment of the 5,950,000 euros to the GCF via IFAD based on a 40-year maturity period and a 10 year grace period. Women-led MSMEs and youth-led MSMEs, FOs, private actors and cooperatives make payments on the principal of their loan and interest to BAGRI. Regardless of the BAGRI's performance, the RoN will make loan payments to GCF through IFAD based on the GCF agreement terms and conditions. BAGRI will also on-lend to MFIs and commercial banks as sub-borrowers. The manual of implementation and lending terms will guide the partnership. On-lending from BAGRI to MFIs and commercial banks shall comply with the eligibility criteria and other project requirements (e.g. passing down GCF concessionality to the final borrowers).
82. With regard to the GCF grant, GCF resources will be directed to the GoN through IFAD. RoN will manage the grant portion. IFAD will provide technical assistance to RoN for the implementation of the GCF grant proceeds. Part of the GCF grant will be allocated to BAGRI for staffing and building an internal system and to support capacity-building of MFIs, FOs, MSMEs, and cooperatives. The AE has conducted the fiduciary assessment of the MoF and Ministry of Agriculture. With regard to BAGRI, although IFAD has a long-term partnership with BAGRI based on the performance, its presence at the field level and attractive interest rate, it is planned to conduct another legal due diligence and a capacity assessment prior to the approval of the project.



BAGRI's clients and segments of interventions

83. Interest rates and tax :

Since the liberalization of the financial sector in 1993, the base rate for banks has not been formally defined by any legal and regulatory text, but rather based on the practices of the banking profession. Each bank, however, is required to report annually to the Central Bank (UEMOA) on the elements it used to calculate its base rate. In Niger, the following objective elements are generally used to determine base rates: interest paid, operating expenses, capital, customer deposits, loans, net reserves and provisions. Interest rates in a business as usual scheme are therefore situated at 10%. With the GCF funding, the BAGRI's interest rate is expected to decrease to 9%, as capacity-building for staff on technical procedures and loan infrastructure is expected to reduce BAGRI operating costs and therefore, the overall interest rates on loans.

High operating expenses

Banks face high operating costs in Niger due to:

- The high costs of factors such as electricity and communications
- The adoption of a new salary scale, which mechanically resulted in an exceptional increase in payroll and a heavy provision expense for retirement packages
- The high cost and scarcity of resources (DAT up to 6.75%)
- A binding tax system
- The narrowness of the credit market that is considered low risk.

More specifically, the TBB could be calculated according to the following formula that uses the definitions below:

- IP = total interest paid over the last twelve months
- RM = Monthly average of all customer deposits, equity and loans
- DE = Sum of operating expenses for the last twelve months
- PS = Specific Provisions or FRBG
- NP = Normal Provisions (provisions for doubtful or disputed receivables for the year)
- $TBB = (IP + DE + NP + PS) / RM$

Due to the high concessionality, the bank agrees to apply 1% management cost.

| C. FINANCING INFORMATION | | |
|----------------------------------|-----------|------------------|
| C.1. Total financing | | |
| (a) Requested GCF funding | 8,500,000 | million euro (€) |

| | | | | | | | |
|--|-----------------------------|---------------------|-------------------------------|--------------|----------------------------------|------------------|--|
| (I + ii + iii + iv + v + vi) | | | | | | | |
| GCF Financial Instrument | | Amount | Currency | Tenor | Pricing | | |
| (i) | Senior loans | 5.95 | million euro (€) | 40 years | 0,00% | | |
| (ii) | Subordinated loans | Enter amount | Options | Enter years | Enter % | | |
| (iii) | Equity | Enter amount | Options | Enter years | N/A | | |
| (iv) | Guarantees | Enter amount | Options | | | | |
| (v) | Reimbursable grants | Enter amount | Options | | | | |
| (vi) | Grants | 2.55 | million euro (€) | | | | |
| (b) Co-financing information | | Total amount | | | Currency | | |
| | | 2,975,000 | | | million euro (€)million euro (€) | | |
| Name of institution | Financial instrument | Amount | Currency ¹⁷ | Tenor | Pricing | Seniority | |
| IFAD | Grant | 2,125,000 | million euro (€) | | | | |
| BAGRI | Senior Loans | 850,000 | million euro (€) | 15 | 1% | Senior | |
| (c) Total investment (c) = (a)+(b) | | Amount | | | Currency | | |
| | | 11,475,000 | | | million euro (€)million euro (€) | | |
| (d) Co-financing ratio (d) = (b)/(a) | 0.35 | | | | | | |
| (e) Other financing arrangements for the project/programme (max ½ page) | No | | | | | | |

.2. Financing by component

| Component | Output | Indicative cost (EUR) | GCF financing | | Co-financing | | |
|--|---|-----------------------|---------------|----------------------|--------------|---------------------------|----------------------|
| | | | Amount (EUR) | Financial Instrument | Amount (EUR) | Financial Instrument | Name of Institutions |
| Component 1: Establishing and utilizing a financing facility” comprising 2 windows (GCF loan- | 500 MSMEs, FOs, Cooperatives receive credit for the implementation of | 8,560,000 | 5,950,000 | Senior Loans | 850,000 | Senior Loans Grant | BAGRI |

| | | | | | | | |
|---|--|------------------|------------------|---------------|------------------|------------|-------------|
| <p>IFAD grant-BAGRI loan).</p> | <p>adaptation and mitigation measures</p> <p>At least 15 MFIs of the 53 MFIs operate credit lines for investments on adaptation and mitigation to climate change</p> | | <p>60,000</p> | <p>Grant</p> | <p>1,700,000</p> | | <p>IFAD</p> |
| <p>Component2: Capacity-building and technical assistance for FOs, cooperatives and MSMEs, BAGRI and to improve their technical and business development skills, key to removing barriers to financing in adaptation and mitigation (GCF Grant-IFAD Grant)</p> | <p>500 FOs, MSMEs and at MFIs have strengthened their capacities in adaptation and mitigation to climate change during the project lifecycle</p> <p>Organizational and technical capacity of BAGRI and at least 15 MFIs strengthened on mainstreaming resilience to climate change into lending.</p> | <p>1,978,500</p> | <p>1,978,500</p> | <p>Grants</p> | <p>0</p> | <p>n/a</p> | <p>n/a</p> |

| | | | | | | | |
|---|---|---------|---------|--------|---------|--|------|
| | <p>A package of tools and instrument to mainstream low emission and climate resilient agriculture/ Livestock developed and applied</p> <p>10 Publications, 3 policy, and brochures produced and 10 Events, south-south exchanges completed Organizational and technical capacity of governments</p> | | | | | | |
| Component 3: Incentive scheme to encourage MFIs, FOS, cooperatives and MSMEs to adopt adaptation and mitigation measures | <p>50 FOs, MSMEs and at MFIs receive incentives to shift toward for adaptation /mitigation to climate change</p> | 515,071 | 390,071 | Grants | 125,000 | GrantsGrantsGrantsGrantsGrantsGrantsGrantsGrants | IFAD |

| | | | | | | | |
|---|--|------------|-----------|-----------|---------|-------|------|
| Project Management Cost | Project Management Unit (PMU) established in BAGRI Monitoring and Evaluation (M&E) system established and operational | 421,429 | 121429 | Grants | 300,000 | Grant | IFAD |
| Indicative total cost (Euros) | | 11,475,000 | 8 500 000 | 2,975,000 | | | |
| 84. IFAD co-financing is in three forms: co-financing of EUR 1,700,000 – under component 1 in form of a grant related to the tripartite cost sharing mechanism that will be finalised in the project under window 1; EUR 125,000 to component 3 in form of grant and EUR 300,000 for project management costs. | | | | | | | |
| C.3. Justification for GCF funding request (max. 500 words) | | | | | | | |
| 85. The Republic of Niger seeks a total of EUR 8.5 million of GCF resources in the form of loans and grants to promote innovation and provide solutions for adaptation to climate change in smallholder agriculture in Niger. Access to credit has a significant role to play in increasing farm productivity but still remains a key constraint for smallholder farmers, farmers' organizations, cooperatives and MSMEs in Niger. As a Least Developed Country located at the heart of the Sahel and one of the poorest countries in the world with limited fiscal capacity, the role of the private sector and financial institutions are key in building the resilience of the economy which depends mainly on agriculture. Given the fragmented nature of players in the Niger's financial markets and the level of risk associated with smallholder agriculture, the investment capacity of institutional investors remains limited among stringent capital allocation decision processes. Further, financial markets are still small, narrow and illiquid and banks and MFIs' interest rates loans are still high. Currently, the commercial interest rate is 12% for commercial banks while BAGRI uses a 10% interest rate. The lack of available and accessible commercial finance on offer by local banks impedes the ability of target beneficiaries to invest in low emission and climate resilient agriculture. As it stands, the concessional funds by the Bank to date have been deposited by development partners. Additionally, the limited resources used to fund BAGRI's business loan activities are still short term, which generate high costs for the Bank, which, in turn, leads to higher interest rate on loans for consumers. | | | | | | | |
| 86. As the country is committed to the climate agenda and various development organizations channel grants through the banks, the interest rates of 1% on the sub-loans offered by BAGRI will stimulate the market. Concessions enabled by GCF loans will be passed down to end-beneficiaries (FOs, cooperatives, MSMEs and smallholder farmers) in the form of reduced pricing compared to the current market. The GCF grant will also contribute to building farmers organizations, cooperatives, MSMEs and farmers' capacity to adopt and implement adaptation and mitigation measures in smallholder agriculture. | | | | | | | |
| 87. The main objective of this project is to support the climate change adaptation of agricultural systems and increase the resilience of farmers' organizations, including youth and women's organizations, cooperatives and MSMEs in Niger to climate change. It further contributes to reducing greenhouse gas emissions through more efficient energy use in the sector via the promotion of solar energy systems for agriculture, including low emission irrigation schemes. The project will achieve these objectives by removing barriers to financial and non-financial services that support farmers in adopting and implementing best climate change adaptation and mitigation measures. | | | | | | | |

C.4. Exit strategy and sustainability (max. 250 words)

88. Reduced interest rates on sub-loans, improved risk analysis and increased capacity of FOs including women and youth organizations, MFIs and MSMEs to use Niger's financial system will ensure the long-term sustainability of the project. Ultimately, the project will boost the growth of a green economy. Sustainability of the project is assured by multiple impacts.
89. GCF funds will allow sub-loans to be extended (at a interest rate of 1 per cent) to MSME's, FOs and cooperatives through a Financing Facility operated by BAGRI. Cumulative recoveries of sub-loan repayments to BAGRI that exceed the necessary service limits on the original GCF loan are predicted to lower interest rates of non-concessional loans after the project's life cycle. Complimentarily, GCF loans will contribute to the development of climate-smart credit scoring tools that ensure that loan applications are appropriately screened to reduce risks to the lender, thereby also contributing to the reduction in interest rates.
90. It is expected that these interventions will reduce BAGRI interest rates from 10 per cent (pre project) to five per cent in the long term. Subsequently, BAGRI loans will gradually become more attractive once the project has ended, as interest will have been reduced, thus stimulating more loan applications and investment in resilient agriculture and RETs. By creating a self-sustaining loan portfolio that ensures continuation of Windows 1 and 2 in the long term, MFIs are also expected to adopt similar approaches and influence the market rates. Beneficiaries of the GCF component could also use their loan approval as collateral for additional rural financing from the IFAD cost-sharing mechanism under PRECIS and other concessional loans within BAGRI.
91. Training and capacity-building for secondary FIs (including ones from the private sector) through Component 2 will stimulate the creation of similar facilities. Decision makers will acquire a better understanding of risk/return profiles related to individual RETs and climate resilient agricultural techniques and be enabled to implement appropriate governance, lending procedures and credit risk tools that reduce FIs' lending risks. In the long term, capital returns on loan repayments from non-government organizations will increase lending power and reduce interest rates from private sector sources to enhance greater investment in RETs and agricultural resilience in Niger. The socio-economic and environmental benefits of RETs and resilient agricultural techniques (e.g. EbA) will be shared through knowledge management interventions to aid the upscaling and replication of these approaches and will be accessible in the long term. Due to this increased number of FIs expected to invest in the sector and the diversity of investments across agricultural value chains, the project interventions are not expected to distort the market. These lessons learned and increased technical capacity will also further enable BAGRI to raise additional funds from global and regional markets to continue providing concessional loans to clients. The project will also support the strengthening of the government's (central and local) technical and institutional capacity to promote green financing, EbA and climate-resilient agriculture and raising the awareness of the FOs, cooperatives, MSMEs and MFIs through better cross-sector coordination, advocacy and policy reforms.
92. The project is also designed to green the private sector (MFIs, other banks) by promoting their participation in partnership with BAGRI. The piloting of the green financing windows through this project will scale up this approach in the country's financial sector. The RoN will provide incentives, a regulatory framework addressing interest rates and extension services in relation to the extent and significance of climate risks, and support better access to concessional finance. The banking systems sustainability element will ensure that farmers and produce penetrate local, regional and national markets financed at affordable credit levels. Building on the impact of reduced interest rates and increased lending, the institutionalisation and exposure of the Sahel Award, through BAGRI, will further increase the profile of RETs and resilient agricultural techniques in Niger. It is expected that the award's outreach will encourage MSME, FOs, cooperatives and smallholder farmers to apply more for financing to install RETs or implement resilient agricultural techniques based on EbAs. Through Activity 3.1.3 (see Annex 2a Log Frame) additional donors and sponsors will be recruited to mobilize funding to sustain the implementation of the Sahel Award after project end.
93. In addition to the mechanisms described above, policy dialogue between the public and private sector, including producers, will contribute to the development of a regulatory framework to sustain project

interventions beyond project duration. Further, throughout the project, , aiding Niger to become a champion on climate finance in the region and to make the transition towards a green economy.

94. The project was designed in close consultation with technical experts, FOs and MFIs to ensure ownership of the interventions and effectiveness of their impact. FOs and local communities, as recipients of loans, will be leading the implementation of adaptation measures as highlighted in the activities supported under window 1. In alignment with this, they will also receive support in formulating viable, long-term business plans that ensure the longevity of physical interventions by including relevant maintenance protocols. Furthermore, ensuring FOs and communities' support for the project ensures that physical structures and nurseries for EBA continue to be maintained once the project ends, as the benefits that they observe over the project cycle is likely to encourage them to contribute inputs in the long term.
95. Capacity-building and training for FOs, women and youth organizations, MSME, MFIs and solar company loan recipients on business plan development will ensure that appropriate measures for maintenance and the long-term operation of installed hybridized solar micro and mini-grids, off-grid solutions and stand-alone systems for agricultural are ensured beyond project completion.

C.5. Financial management/procurement (max. 300 words)

96. The financial management of and procurement for the project will be carried out in accordance with IFAD applicable rules and practices, as well as IFAD's Program Implementation Manual (PIM), the project specific PIM and loan administration arrangements established through the Letter to the Borrower. During supervision missions, semi-annual and annual project reports will be prepared by the Project coordination unit; reports (progress reports, lessons learnt, expenditures and project risk) will be provided by the PMU located within the BAGRI to IFAD. IFAD will support the RoN in monitoring progress on implementation.
- **The project PMU (BAGRI):** Quarterly progress reports will be prepared by the project's implementing partners (borrowers such as FOs, MSMEs, cooperatives, MFIs and solar operators) and submitted to IFAD to ensure continuous monitoring of project activities and identify challenges to adopt necessary corrective measures in due time. Technical reports (inception, best practices, terminal evaluation report, midterm review, supervision) will also be completed.
 - **Financial reporting:** The finance officer within the PMU will provide IFAD with certified periodic financial statements in accordance with international accounting standards, as well as audit reports in accordance with IFAD's handbook for Financial Reporting and Auditing of IFAD-financed projects.
 - **External evaluations:** The project will undergo an independent external midterm evaluation of progress on targets at the midpoint of the implementation period. A final evaluation will be conducted three months before project closure.
 - **Field visits:** Government authorities, members of Project National Steering Committee and IFAD staff will conduct regular field visits to project sites based on the schedule established in the project's Inception Report/Annual Work Plan to assess project progress first-hand.
 - **Procurement:** Procurement plans will be conducted in accordance with IFAD's procurement handbook and guideline. Procurement plans will be prepared annually and validated by the steering committee. Before initiating activities, BAGRI will request a No Objection from IFAD, as all other IFAD funded projects with the government do. Please see Annex 8 for more detail.
 - **Loans:** The RoN is entitled to request disbursements of funds from IFAD, for amounts spent or planned to be spent for the purposes set out in the financing agreement between the two parties, subject to fulfilment of the conditions outlined in the financing agreement and loan administration arrangements. Except with the IFAD's consent, no disbursements shall be made (a) on account of expenditures procured in violation of the IFAD's Procurement Rules; or (b) to finance expenditures incurred prior the date of the financing agreement other than those that are expressly permitted. Requests for disbursement shall be made promptly and in conformity with the IFAD's disbursement rules and procedures
 - **TA grants:** Payment modalities to be established in the Letter to the Borrower.
 - **Governance:** A National Steering committee will oversee the allocation of the funds (loans/grants) as agreed with the GCF.
 - **Audit:** will be conducted in accordance with IFAD's handbook for Financial Reporting and Auditing of IFAD-financed projects. More details regarding audit arrangements, including frequency of audit, auditing

standard used and audit of project expenses incurred by the EEs and the AE's role in recruiting auditors can be found in the IFAD' handbook available online.

D. LOGIC FRAMEWORK AND MONITORING, REPORTING AND EVALUATION

This section refers to the project/programme's logic framework in accordance with the GCF's Performance Measurement Framework under the Results Management Framework to which the project/programme contributes as a whole, including in respect of any co-financing. This is different from the project/programme-level log frame(as there may be other impact measures for example that go beyond those defined by the GCF).

A project-level logical framework, with specific indicators, baselines and targets, means of verification and assumptions should be provided as part of Annex 2.

D.1. Paradigm shift objectives

Increased climate-resilient sustainable development

Removing barriers to access financial and non-financial services for adopting and implementing best climate change adaptation and mitigation measures (solar energy for agriculture).

D.2. Impacts measured by GCF indicators

Select the appropriate impact for the project/programme. Note that more than one indicator may be selected per expected impact result. Add results as appropriate.

| Expected Result | Indicator | Means of Verification (MoV) | Baseline | Target | | Assumptions |
|---|---|--|-------------------------|---|---|---|
| | | | | Mid-term (if applicable) | Final | |
| Core level indicators (Mitigation) | | | | | | |
| | Tonnes of carbon dioxide equivalent (tCO ₂ eq reduced as a result of Fund-funded projects/programmes | Project M&E Report Annual verification of project mitigation outcomes | 0 t CO ₂ eq. | 200,780 tCO ₂ eq reduced or avoided as a result of Fund funded project | 404,560 tCO ₂ eq reduced or avoided as a result of Fund funded project | These targets are estimated based on an ex-ante model prior to the start of the project. Actual emission reductions will be estimated on an actual project basis during the duration of the project. Carbon calculations for targets here are based on 5-year implementation phase where the total reported in section E6 includes the 20 year |

| | | | | | | |
|--|---|--|---------------------------------|------------------------------------|-----------------------------------|---|
| | | | | | | <p>capitalization Phase.</p> <p>This equals 80,312 tCO₂eq per annum, with a total lifetime emissions reduction of 1,606,242 tCO₂eq (20 years of lifetime).</p> <p>Information will be aggregated at the subprojects level</p> |
| | <p>Cost per tCO₂eq decreased for all Fund-funded mitigation projects/ programmes</p> | <p>Annual verification of project mitigation outcomes; Finance and M&E reports</p> | <p>0 EUR /tCO₂eq</p> | <p>EUR 14.28/tCO₂eq</p> | <p>EUR 7.14/tCO₂eq</p> | <p>Calculated using Total Project, financing divided by Expected lifetime emission reductions overtime, including capitalisation phase,</p> <p>Targets presented here are only for the implementation phase of the project 5 years.</p> <p>The baseline is set at EUR 0 per tCO₂eq as no information on the abatement cost on the similar activities in the sector is available.</p> |

| | | | | | | |
|--|---|--|------------|--------|--------|--|
| | Volume of finance leveraged by Fund funding | Finance reports by <u>financial institutions</u> ; co-financing letters by <u>projects</u> | EUR 2,550M | EUR 5M | EUR 8M | Based on estimates by IFAD at the start of the project and preliminary discussions with co-financiers Baseline: of US\$ 2,550,000 M is the amount of additional financing leveraged as a result of the project from BAGRI (850,000 EUR) and from IFAD (1,7M EUR)=2,550,000EUR |
|--|---|--|------------|--------|--------|--|

Core level indicators (Adaptation)

| | | | | | | |
|--|---|---|---|--|---|---|
| | Total number of direct and indirect beneficiaries; number of beneficiaries relative to total population | National statistics; annual project reports | 0 | <p>Direct 12,500 people Male: 6,875 people Female: 5,625 people</p> <p>Indirect 75,000 people Male: 41,250 people Female: 33,750 people</p> <p>Direct 0.05 % of total population of Niger</p> | <p>Direct 25,000 people Male: 13,750 people (55%) Female: 11,250 people (45%)</p> <p>Indirect 150,000 people Male: 82,500 people Female: 67,500 people</p> <p>Direct</p> | <p>Total population of Niger is estimated at 21.5 million people (same data as IFAD PRECIS project-Source World Bank 2017)</p> <p>Direct beneficiaries: head of households, 1 head represented by 1 person (25,000 people (head of household for 25,000 households))</p> <p>Indirect Beneficiaries: to calculate indirect</p> |
|--|---|---|---|--|---|---|

| | | | | | | |
|--|--|--|--|--|--|---|
| | | | | <p>Male: 0.0315% of total population of Niger</p> <p>Female: 0,0247% of total population of Niger</p> <p>Indirect</p> <p>0,40% of total population of Niger</p> <p>Male: 0,22% of the total population of Niger</p> <p>Female: 0,18% of the total population of Niger</p> | <p>0.11 % of total population of Niger</p> <p>Male: 0.063% of total population of Niger</p> <p>Female: 0.0495 % of total population of Niger</p> <p>Indirect</p> <p>0.7% of total population of Niger</p> <p>Male: 0.44% of the total population of Niger</p> <p>Female: 0.36% of the total population of Niger</p> | <p>beneficiaries, on average based on national statistics each household has 7 members</p> <p>Climate resilient agricultural solutions promoted by FOs, MSMEs, Cooperatives, MFIs will improve the resilience of ecosystems and people's livelihood</p> <p>Disaggregated at the firm, household and national levels</p> <p>Customers and % of population that will benefit from improved processed and packaged food products from women led and Youth led MSMEs/FOs and cooperatives</p> |
|--|--|--|--|--|--|---|

Fund level Indicators

| | | | | | | |
|--|---|---|----------------|--|---|---|
| M1.0 Reduced emissions through increased low-emission energy access and power generation | M1.1 Tonnes of carbon dioxide equivalent [tCO2eq] reduced or avoided as a result of Fund funded projects/programmes - gender-sensitive energy access power generation | Project reports, MWh of power generated by installed PV solar panels from RET loans | 9,982 tCO2 eq. | 4,991 tCO2 eq. 2,246 tCO2 eq. avoided as a result of energy access by males 2,744 tCO2 eq. avoided as a result of energy | 9,982 tCo2eq. (total emission) 4,492, tCO2 eq. avoided as a result of energy access by males | Communities are willing to adopt innovative rural electrification models through hybridized solar micro and mini-grids, off-grid solutions, standalone systems for powering |
|--|---|---|----------------|--|---|---|

| | | | | | | |
|--|---|--|-----------|--|---|---|
| | | | | access by females. | 5,489 tCO2 eq. avoided as a result of energy access by females. | <p>agricultural value chains.</p> <p>Carbon calculations for targets here are based on 5-years implementation phase where the total reported in section E6 includes the 15 year capitalization Phase.</p> <p>It is estimated that there will be 1,996 tCO2eq/year mitigated from RETs over the implementation phase.</p> <p>The Baseline is based on the total amount of current CO2 emissions from diesel-powered electricity at farm level in Niger. Please see annex 12 for more detail</p> <p>Annual average emission reduction estimates: - 1,996 tCO2eq Information will be aggregated at the subprojects level</p> |
| M4.0 Reduced emissions from land use deforestation, forest | 4.1 Tonnes of carbon dioxide equivalent (tCO2eq) reduced or avoided (including increased removals) as a result of Fund funded | Project reports, annual mitigation outcomes verification | 0 tCO2 eq | 197,527 tCO2eq reduced or avoided as a result of Fund funded project | 395,053 tCO2eq reduced or avoided as a result of Fund | <p>Communities are willing to sustainably manage land</p> <p>Estimates for Carbon calculations for</p> |

| | | | | | | |
|--|--|---|--|---|--|---|
| <p>degradation, and through sustainable management of forests and conservation and enhancement</p> | <p>projects/programmes – land-use</p> | | | | <p>funded project</p> | <p>targets here are based on a 5-year implementation phase where the total reported in section E6 includes the 15 year capitalization Phase.</p> <p>Annual average emission reduction estimates: 79,010 tCo2eq</p> <p>Baseline is calculated as zero as the land use change associated with the project is innovative to the target sites and not previously employed.</p> <p>Information will be aggregated at the subprojects level for land use changes.</p> |
| <p>A1.0 Increased resilience and enhanced livelihoods of the most vulnerable people, communities and regions</p> | <p>A.1.2 Number of males and females benefiting from the adoption of diversified, climate resilient livelihood options (including fisheries, agriculture, tourism, etc.)</p> | <p>Project reports, stakeholder surveys including interviews to assess increased resilience</p> | <p>Baseline surveys to be carried out during the start-up assessment. Determining vulnerability and adaptation needs</p> | <p>Direct 12,500 people Male: 6,875 people Female: 5,625 people Indirect 75,000 people</p> | <p>Direct 25,000 people Male: 13,750 people (55%) Female: 11,250 people (45%)</p> | <p>Climate resilient agricultural solutions promoted by FOs, MSMEs, Cooperatives, MFIs will improve the resilience of ecosystems and people's livelihood</p> |

| | | | | | | |
|---|--|--|---|---|---|--|
| | | | | <p>Male: 41,250 people</p> <p>Female: 33,750 people</p> <p>(FI) : 5 commercial banks, 15 MFIs</p> <p>Indirect Beneficiaries: 250 FOs or cooperatives; 150 MSMEs</p> | <p>Indirect 150,000 people</p> <p>Male: 82,500 people</p> <p>Female: 67,500 people</p> <p>(FI) : 10 commercial banks; 30 MFIs</p> <p>Indirect Beneficiaries: 500 FOs or cooperatives; 300 MSMEs</p> | |
| A2.0 Increased resilience of health and well-being, and food and water security | A.2.1 Number of males and females benefiting from improved health, well-being, and food and water security | Project reports, stakeholders surveys, other ministries reports (ministry of health, water, local development) | Baseline surveys to be carried out during project year 1 to establish current levels of health, well-being, and food and water security | <p>Direct 12,500 people</p> <p>Male: 6,875 people</p> <p>Female: 5,625 people</p> <p>Indirect 75,000 people</p> <p>Male: 41,250 people</p> <p>Female: 33,750 people</p> <p>benefiting from improved health, well-being, and food and water security</p> | <p>Direct 25,000 people</p> <p>Male: 13,750 people (55%)</p> <p>Female: 11,250 people (45%)</p> <p>Indirect 150,000 people</p> <p>Male: 82,500 people</p> <p>Female: 67,500 people</p> <p>female) benefiting from improved health, well-being, and food</p> | FOs, MSMEs, Cooperatives, MFIs and communities willing to promote Climate resilient Agricultural solutions to increase the resilience of health, well-being, food and water security |

| | | | | | | |
|---|---|---|---|--|--|--|
| | | | | | and water security | |
| A4.0 Improved resilience of ecosystems and ecosystem services | A4.1 Coverage/scale of ecosystems protected and strengthened in response to climate variability and change. | Project-level field surveys GIS maps of project intervention sites. | 0 | At least 10,626 ha hectares of land and degraded forests and pastoral land rehabilitated and sustainably managed | At least 21,252 ha hectares of land and degraded forests rehabilitated and sustainably managed | Target communities and authorities are willing to adopt and implement the proposed transformative knowledge and measures transferred through the project to protect ecosystems and strengthen response to climate change variability |

D.3. Outcomes measured by GCF indicators

| Expected Outcomes | Indicator | Means of Verification (MoV) | Baseline | Target | | Assumptions |
|--|---|---|----------------------------------|--|---|--|
| | | | | Mid-term (if applicable) | Final | |
| | Number of technologies and innovative solutions transferred or licensed to support low-emission development as a result of fund support | Project M&E Reports | 0 | 10 technologies | 20 technologies | Customers and % of population willing to adopt and implement the technologies improved |
| <i>M6.0 Increased number of small, medium and large low-emission power suppliers</i> | M6.2 Number of households and individuals (males and females with improved access to low-emission energy | Project reports, national and regional statistics | 0 people 0 males 0 females | 12,500 people 87,500 people Male: 48125 people Female: 39375 people | 25,000 people 175,000 people Male: 96,250 people Female: 78,750 people | Households and % of population willing to access to improved access to low-emission energy |

| | | | | | | |
|---|---|---|------|---|---|--|
| | | | | | | |
| | M.6.3 MWs of low-emission energy capacity installed, generated and/or rehabilitated as a result of GCF support. | National energy statistics | 0 MW | 2,13 MW | 4.26MW | Communities and stakeholders willing to adopt RETs |
| M9.0 Improved management of land or forests areas contributing to emission reductions | M9.1 Hectares of land or forests under improved and effective management that contribute to CO2 emission reductions | National and regional statistics every two years, programme M&E reports | 0 ha | 10,626 ha | 21,252 ha | Mitigation and adaptation will happen in selected areas and Target communities and authorities are willing to adopt and implement the proposed transformative knowledge and measures transferred through the project to protect ecosystems and strengthen response to climate change variability |
| A7.0 Strengthened adaptive capacity and reduced exposure to climate risks | A7.1 Use by vulnerable, communities, businesses, and public sector services of Fund supported tools, instruments, strategies and activities to respond to climate change and variability. | Project and BAGRI reports as well as stakeholder surveys | 0 | At least 5 banks, 15 MFIs and 250 FOs and or, Cooperatives and 150 MSMEs use one or more tool, instrument, strategy or product, worthiness tool, safeguard) to respond to | At least 8 banks, 30 MFIs and 500 FOs and 300 MSMEs use one or more tool (Smart credit-scoring tool, to support the identification of bankable and de-risked projects, credit | identification of bankable and de-risked projects, credit worthiness tool, safeguard instruments, strategies and activities developed by the project will improve adaptive capacity |

| | | | | | | |
|---|---|--------------------------|--------------------------|---|---|--|
| | | | | climate risks in their lending portfolio | worthiness tool, safeguard), instrument, strategy or product (worthiness tool, safeguard) to respond to climate risks in their lending portfolio | |
| A8.0 Strengthened awareness of climate threats and risk-reduction processes | A8.1 Number of males and females made aware of climate threats and related appropriate response | Project reports, surveys | 0 males 0 females | 87,500 beneficiaries (39,375 (45%) female, 48,125 (55%) male) benefiting from the adoption of diversified, climate resilient livelihood options Indirect Beneficiaries (FI): 5 commercial banks, 15 MFIs, 250 FOs or cooperatives; 150 MSMEs | 175,000 beneficiaries (78,750 (45%) female; 96,250 (55%) male) benefiting from the adoption of diversified, climate resilient livelihood options Indirect Beneficiaries (FI): 10 commercial banks; 30 MFIs, 500 FOs or cooperatives; 300 MSMEs | Assuming 100% of targeted rural communities are willing to build their capacity and be more aware about climate threats and risk-reduction processes |

D.4. Arrangements for Monitoring, Reporting and Evaluation (max. 300 words)

Project Monitoring and Reporting

97. The Project Management Unit (PMU), under the close supervision of IFAD, will set up a monitoring and evaluation system to ensure the smooth implementation of the project, identify constraints and delays to ensure timely corrective action is taken, monitor results against the project indicators and ensure timely reporting. The primary responsibility for the day-to-day monitoring of project implementation lies with the Project Manager. In close consultation with the IFAD Country Programme Manager (CPM) and Regional Climate and Environment Specialist (RCES), the Project Manager will develop the annual work plans and budgets for approval by the Project Steering Committee. The Project Manager will advise BAGRI, the IFAD CPM, Country Director and the RCES of any delays and difficulties in project implementation to ensure technical support is provided and corrective actions are taken in a timely manner. Under the technical supervision of the RoN Ministry of Finance the project will be implemented according to the IFAD Country Program Approach in Niger. The project will integrate into the IFAD infrastructure in the country that has regional coordination units in the target regions, each with technical, administrative and financial support for the planned activities in the region and, (ii) a National Representation and Technical Assistance Unit (CENRAT), formerly known as the "National Technical Assistance Cell (CeNAT)" whose role has been reviewed. This management structure will

be in charge of the supervision and monitoring of the GCF component in each region in coordination with the GCF PMU within BAGRI.

98. A project inception workshop will be held after project agreements have been signed. The purpose of the workshop will be to: (i) ensure that project stakeholders understand the project's strategy and implementation arrangements; (ii) develop and confirm baselines; (iii) discuss roles and responsibilities of the project team, BAGRI and IFAD with respect to project implementation, reporting, communication and conflict resolution; (iv) review the results framework, indicators and targets, and the M&E plan; (v) review project progress and financial reporting requirements, roles and responsibilities and agree on arrangements for the annual project audit; and (vi) agree on terms of reference of the National Steering Committee, the schedule of meetings and the first year work plan. The Project Manager will prepare the Inception Report no later than one month after the inception workshop. The CPM and RCES will review and clear the report and submit it to the Environment, Climate, Gender and Social Inclusion Division (ECG) for clearance and submission to the GCF.
99. IFAD (the CPM and RCES) will provide implementation and technical support, as required, and monitor project progress throughout the duration of the project. The CPM and RCES will use IFAD supervision missions organized on a 6-month basis to supervise the project. The mission will meet all stakeholders, BAGRI and potential beneficiaries (FOs, MSMEs, cooperatives, RET, private operators and MFIs) as well as end beneficiaries and government partners using interviews and focus groups. Supervisions mission will be covered by IFAD budget, while MTRs (midterm reviews) and the final evaluation will be carried out using GCF funds. Technical partners will be mobilized to support BAGRI and the Republic of Niger in designing and implementing the lending products.
100. The Project Manager/BAGRI will submit quarterly project progress and financial reports to the CPM who will share it with responsible divisions in IFAD. The IFAD Finance Officer responsible for Niger will review the financial reports. These quarterly reports will form the basis for the Annual Performance Report (APR) and six-monthly financial reports that IFAD will submit to the GCF.
101. The Project Manager and IFAD CPM and RCES will provide inputs into the Annual Performance Report (APR) for each year of project implementation using the template provided by the GCF. The Project Manager will monitor the indicators in the results framework and ensure accurate reporting on project progress in the APR. The IFAD CPM and/or RCES will coordinate input from the NDA to the APR. The APR will be shared with the National Steering Committee, the Ministry of Finance, NDA and other key stakeholders. ECG will review and submit the APRs to the GCF within 60 days after the end of the calendar year, unless otherwise specified in the Funded Activity Agreement (FAA). IFAD will provide six-monthly financial reports to the GCF utilizing the template provided by the GCF and in accordance with the timeframe stipulated in the FAA.

Project Evaluation

102. An independent mid-term review (MTR) will be carried out around project year 2.5. Summative evaluations will be conducted to assess at mid-way and at the end of the project whether the results of the project met the stated goals. Methods and tools to be used in M&E exercise will combine surveys; pre and post-tests; control groups, etc. IFAD will select the independent consultant(s), approve the terms of reference and review process and covers expenses through the AE fee. The independent consultant will be hired by the PMU. The National Steering Committee will provide strategic guidance on project progress and challenges and inputs for management's response. Findings will be used to enhance project implementation during the remainder of the project. M&E and supervisions cost will be covered by IFAD.
103. An independent terminal evaluation will be carried out in accordance with the IFAD Evaluation Manual and procedures. The IFAD CPM, Country Director, and RCES will review the Terminal Evaluation Report. The IFAD Office of Independent Evaluation (IOE) will assess the quality of the report and validate the findings and ratings. The TER will be shared with BAGRI, the Ministry of Finance, NDA and other members of the National Steering Committee. The TER will be made available in English.

E. EXPECTED PERFORMANCE AGAINST INVESTMENT CRITERIA

E.1. Impact potential (max. 300 words)

| | | |
|---|----------|--|
| E.1.1. Expected tons of carbon dioxide equivalent (t CO ₂ eq) to be reduced or avoided (Mitigation only) | Annual | 80,312 tCO ₂ eq |
| | Lifetime | 1,606 240 tCO ₂ eq (20 years) |
| E.1.2. Expected total number of direct and indirect beneficiaries, disaggregated by gender | Direct | 25,000 50% of female |
| | Indirect | 150,000 50% of female |
| E.1.3. Number of beneficiaries relative to total population | Direct | 0.12 (Expressed as %) (Total population estimated to 21,5 M) |
| | Indirect | 0.7 (Expressed as %)(Total population estimated to 21,5 M) |

Indirect beneficiaries of the project will benefit from: i) value chains development, business development through the promotion of renewable energy in agriculture; reforestation activities, which will reduce the occurrence and impacts of floods, maintain and enhance groundwater and surface water resources and stabilize soils in the target areas; ii) awareness-raising campaigns on climate change and adaptation; and iii) enhanced capacity of actors to identify and manage climate risks along the agricultural/ livestock value chains.

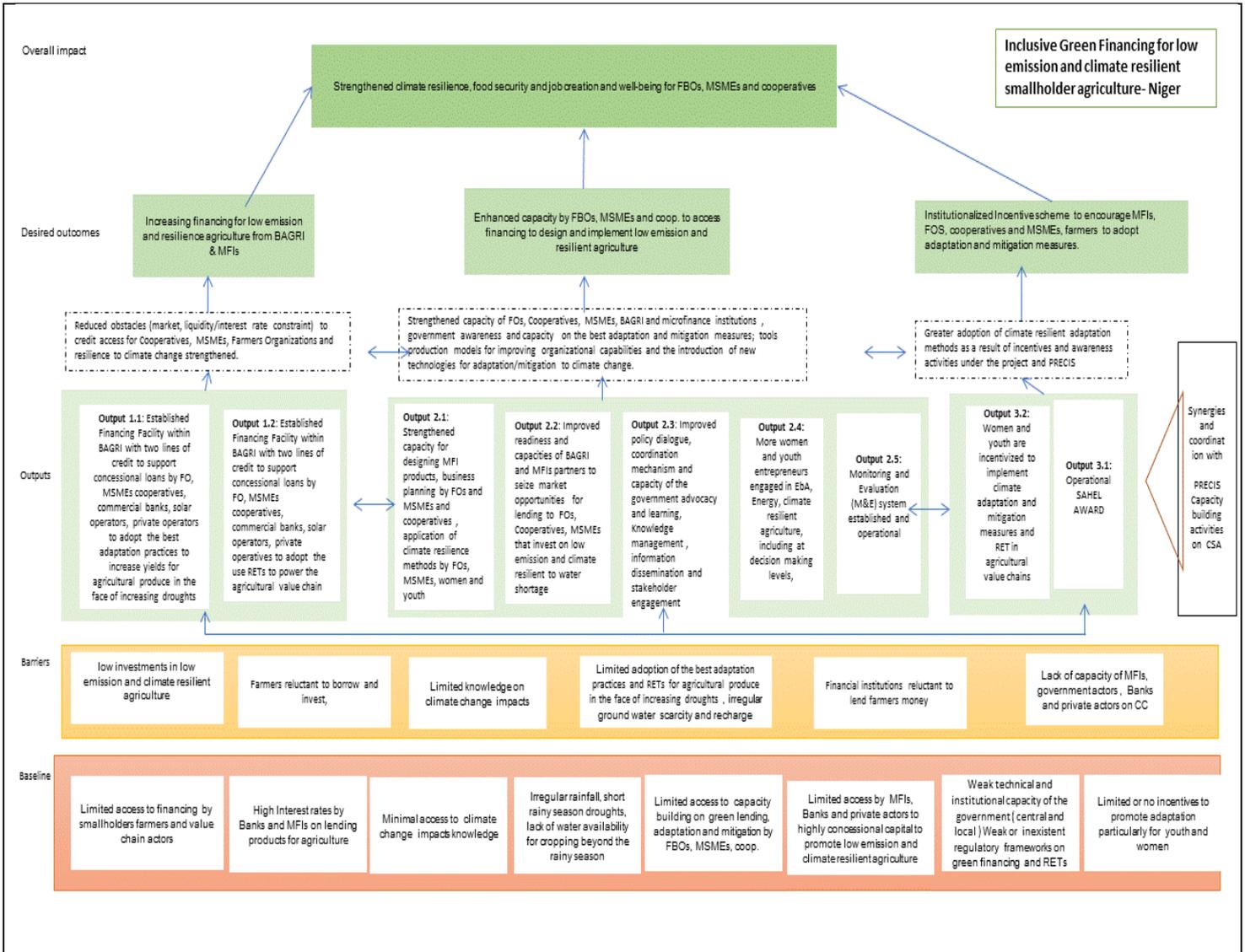
E.2. Paradigm shift potential (max. 300 words)

104. The project will stimulate adoption of climate resilient and low emission agriculture, ecosystem-based adaptation and the use of renewable energy. This project's goal is to increase resilience to climate change of farmers' organizations, including youth and women's organizations, cooperatives and MSMEs in Niger by removing barriers to access financial and non-financial services for adopting and implementing best climate change adaptation to address water stress, availability and balance per cropping season in the selected locations (see feasibility studies) and evapotranspiration loss for a the key crops and mitigation measures (promotion of solar energy for agriculture). When successfully implemented, the project will enable robust development of the market, promote low emissions, and irrigation schemes and practices to expand the production period during the off-season, while using energy as the best way to adapt to climate change. The benefits of efficient energy use have the potential to build the resilience of the agricultural sector to climate change. This approach integrates the supply side through highly concessional loans and the demand side through market stimulation. This integrated approach envisions that the market shift toward sustainable loans will occur by institutionalizing a green investment portfolio that will contribute to sustainable climate resilience within Niger. Increased investment in agricultural value chains will stimulate further investment from third parties and secondary sectors. This will contribute to the scaling up of Niger's capacity to adapt to climate change and address key barriers related to rainfall, ground water availability and temperature variability, drought and floods that have impacts such as lower yields and loss of productive assets or income of the most vulnerable people, particularly women and youth. This creates one more source of pressure on a food production system that is already fragile and already faces major challenges associated with food insecurity in Niger. This also fuels migration, conflicts and insecurity, as more and more youth join existing terrorist groups such as Boko Haram.

105. Additional support to BAGRI will also allow BAGRI to become a champion of sustainable and climate resilient agriculture in the Sahel region and generate opportunities for replicating projects elsewhere in the country and to further scale up the country's investment in climate resilience and food security.

106. At the local level, GCF funds will enable Niger's stakeholders in smallholder farming systems to improve their livelihoods, strengthen local knowledge of climate change and adopt low emission and climate resilient agriculture. This will be achieved by investing more in best existing agricultural practices, solutions and new innovations. The project will generate socio-economic and environmental benefits through on-the-ground implementation of EbA and low emission and climate-resilient agriculture interventions, which includes the restoration of 21,252 ha of degraded land and reduction of CO₂ emissions (-1,606 240 tCO₂ eq) through mitigation and adaptation co-benefits. With horizontal learning and capacity-building on climate smart practices across the project, there is potential for greater adoption/uptake of climate smart practices, which will increase the project's impact. Climate susceptibility and greenhouse gas emissions will be greatly reduced in comparison to current practices.

Theory of Change (See Annex Presentation)



E.3. Sustainable development (max. 300 words)

107. **Environmental:** The project intends to reduce energy use from biomass – including firewood and agricultural residues (80% of total), imported diesel fuel (11%), electricity (2%) and charcoal (1%), which are the main sources of electricity in Niger – by providing greater access to renewable energy. It is expected that CO2 emissions (-39,927 tCO₂ eq) will be reduced during the project’s lifecycle and limits will be placed on the use of biomass and diesel for energy consumption. With the promotion of the EbA, more than 21,252 ha of degraded land will be restored and sustainably managed with improved ecosystems good and services. Along the agricultural/livestock value chains, the project will build up each component of the value chains from production to markets, increase the productivity of key commodities and income while safeguarding the environment. Through the adoption of climate resilient agriculture, the project will reduce soil erosion and soil fertility loss, enhance soil moisture retention and maintain soil temperatures suitable for crop production.

108. **Social:** Reduced smoke from use of fuelwood, educational and health and other off-farm activities beyond daylight hours can be achieved with the use of renewable energy. By establishing a Financing Facility and the special window to promote renewable energy use in agriculture, the project will address both health risks posed by the use of biomass to their immediate users including burns and direct inhalation of toxic PM 2.5 particles. It will generate positive impact through decentralized electrification, improve income and better the livelihoods of smallholder farmers and rural communities. With regard to EbA, the project will contribute to improvements of ecosystem services (recreational, cultural services, natural, spiritual, medicinal, etc.). When implemented, climate resilient agriculture should contribute to improving nutrition, social inclusion and better livelihood and access to credit. The project will contribute to reducing

poverty and exposure to environmental and climate-related hazards such as floods and improve awareness and knowledge on climate change and sustainable forest management practices. It will also contribute to social cohesion.

109. **Economic:** The project's ultimate goal is to improve the incomes of farmers, MSMEs and cooperatives, FOs and the profits of financial institutions. The implementation of low emission and climate resilient agriculture, EbA, adoption of renewable energy sources for agriculture will increase the income of farmers and all actors along the agricultural value chains. Improved productivity of livestock raising, agriculture and forestry will lead to agricultural surpluses that can be marketed in national and regional markets. It is expected an increase in sales as the climate resilience increases. Training and capacity-building of project beneficiaries will enable them to optimize the benefits. The solar equipment that will be promoted will contribute in country, household and MSMEs fossil fuel expenses.
110. **Gender considerations:** The project has set targets: 45% of loans are to be granted to women-led MSMEs, cooperatives and FOs. The other 55% will be dedicated to youth-led MSMEs, cooperatives and FOs in which young women participate. Specific actions will be developed to strengthen the technical and managerial capacities of women aimed at providing them with appropriate tools for identifying and developing bankable business plans and improving their level of financial education. As stated in the gender action plan, gender-disaggregated data will be assessed against the appropriate indicator to measure women's enhanced access to loans. The project intends to close the gender gap, as women represent 60 to 70% of the work force and do not have access to productive assets, finance and knowledge. Women will be included into the National Steering Committee to ensure that they influence the main strategic decisions.

E.4. Needs of recipient (max. 300 words)

111. The extreme variability of Niger's climate and the expected long-term evolution of the warming effect of increases in global greenhouse gases means that one single climatic future for the basin is unlikely. Climate change projections predicts an increase of temperature. Downscaled climate model projections for Niamey covering the period 2040-2060 compared to 1980-2000 anticipate an increase of between 1°C and 3°C. These projections indicate that Niger is likely to face difficult climate challenges ahead, with perhaps more total rainfall than in some previous decades that will be punctuated by unpredictability, soaring temperatures, dry spells and intense storms. Floods are a recurrent natural hazard in Niger and are projected to increase in frequency in the future, especially in the southern part of the country.
112. Climate impacts have negative impacts on agriculture. They reduce productivity, food security and GDP, cause endemic diseases (malaria) and increase rural poverty. Given Niger's high poverty rate (see feasibility study for more detail) and the impacts of climate change, the country has few financial institutions that want to risk investing in the smallholder farming even though agriculture remains the main source of economic growth.
113. The banking sector is made up of 10 banks and one financial institution; almost 90% of the assets are concentrated in the hands of the country's four major commercial banks. Niger's financial system remains weak with a limited number of instruments. BAGRI is the main bank; it has the largest network established at the local by the government to address the climate challenges in agriculture. BAGRI has limited possibilities of mobilizing highly concessional loans in the capital markets. Even so, it is still committed to supporting the government in fulfilling international commitments, particularly the NDCs. Key barriers are related to adaptation capacity to climate change across the country, skills and knowledge on climate finance, the nascent regulatory framework and the need to de-risk the sector.
114. Technical assistance and funding for the establishment of a Financing Facility to provide concessional loans (with reduced interest rates from 10% to 4.75%) in association with climate smart credit risk tools will enhance loan applications, contribute to de-risking the sector and foster greater knowledge on climate finance and adaptation across the country. They will directly help overcome the key barriers that BAGRI faces.

E.5. Country ownership (max. 500 words)

115. The project is fully aligned on the 2017-2021 National Development Plan (Plan de Développement Économique et Social, PDES) which envisions a transition to a green economy driven by MSMEs and private sector investment. This plan aims to deliver sustainable and inclusive benefits by promoting the adoption of climate resilient interventions, sustainable natural resource management and measures fostering the inclusion of youth and women as key economic actors, together with farmers organizations, MSMEs and cooperatives. This PDES made specific reference to climate change. The project is also aligned on the National Adaptation Plan (2014), the National Climate Change Policy (PNCC) adopted in 2013, the country's Sustainable Development and Inclusive Growth Strategy (SDDCI) and its National Economic and Social Development Plans, the "Nigeriens Nourish the Nigeriens" Initiative (Initiative 3N), the Sustainable Development and Inclusive Growth Strategy (SDDCI) and the National Climate Learning Strategy. With the renewed 2030 agenda, Niger is committed to achieving the Sustainable Development Goals (SDGs) and the pledge

to leave no one behind by paying special attention to the conditions of poor smallholder farmers who depend on natural resources and are extremely vulnerable to climate change. It is in this context that Niger signed the Paris Climate agreement for its Nationally Determined Contributions. Under the Nationally Determined Contribution (NDC) the priority programmes includes i) forest management for the restoration of degraded ecosystems; assisted natural regeneration and the fight against desertification and greater protection for protected areas; ii) the development of smart, climate-resilient agriculture through hydro-agricultural infrastructure; iii) climate-resilient pastoral development to create transhumance routes, and pastoral areas and develop rangeland; iv) rainwater capture and storage to ensure universal access to drinking water and water for other uses; and v) the development of renewable energy sources and energy efficiency through photovoltaic energy, small hydroelectric plants and biomass energy. In alignment with the Niger's National Adaptation Plan (NAP), with GCF funding, the project will help mainstream climate change into national planning and budgeting, build the capacity of the stakeholders in agriculture and the financial sector and propose adaptation and mitigation measures according to future scenarios.

116. To achieve these commitments, Niger needs to build the capacity of all actors in the agricultural sector to be able to understand climate change and the best way to address it and build financial institutions' capacity to invest in low emission and climate resilient agriculture. Additionally, to address both adaptation and mitigation gaps in agriculture, it is important to mobilise both domestic and international funds from private investors and banks to support mitigation and adaptation through highly concessional terms. The project idea was identified in November 2018, through consultations with the NDA (Nationally Designated Authority) and BAGRI. A Concept Note was presented to, and validated by, the CNCC (Comité National de l'Environnement et du Développement Durable) in December 2018. The committee confirmed that the proposed GCF project responds to the Niger's national needs and priorities for climate change adaptation and mitigation. A letter of non-objection was issued in December 2018 to support the submission to the GCF. This proposal was developed in consultations with the main stakeholders following missions in Niger which took place in January and February. These include: the National Commission for Environment and Sustainable Development, the Ministry of Agriculture, the Ministry of Forestry, Ministry of Water and Sanitation, BAGRI, the Agency for Renewable Energy, Ministry of Local Development, Ministry of Employment and civil society. Intervention areas are the same as the ones targeted by IFAD's ANERSOL project. During IFAD's supervision mission, consultations were held with potential beneficiaries. The GCF, IFAD, the Republic of Niger and BAGRI met in Abidjan to further discuss the lending terms and management arrangement of the proposal in April 2019.
117. Since 1979, as an AE, IFAD has funded 12 projects in Niger with a total approved cost of USD 556,457,303, which directly benefited 1,023,200 households. IFAD financing in Niger is classified as: IFAD loans, IFAD SPA loans, IFAD SPA grants, IFAD grants, IFAD Debt Sustainability Framework (DSF) grants and Adaptation For Smallholder Agriculture Programme (ASAP), loan component grants. They mainly target climate resilience and livelihood improvement. IFAD is also working with other Rome Based Agencies (FAO, WFP) within the UN country team for the delivery of the 2030 Agenda on Sustainable Development Goals (SDGs) in Niger, particularly those related to poverty, hunger and food security, climate change and ecosystem sustainability. Currently, BAGRI has 25 partnerships with various organizations, including IFAD, to specifically target climate sustainable agriculture including climate resilience. BAGRI is implementing 5 billion FCFA from IFAD through PRODAF, which has a specific component on adaptation.

PRECIS Risks and mitigation measures

118. Under PRECIS, which is the main baseline investment, risks requiring attention and mitigation measures include:
- the adverse environmental and climatic conditions of the Sahelian environment (drought and a sharp drop in the groundwater level) which can lead to the decapitalization of the most vulnerable populations during severe crises. PRECIS will pay particular attention to climate predictions and will produce and disseminate meteorological information to prevent / anticipate crises (GIS / remote sensing), and promote appropriate production technologies to enable producers to practice agriculture that is resilient to the shocks associated with the effects of climate change. In addition, households will be encouraged to diversify their income sources by engaging in rainfed and/or irrigated agriculture coupled with small livestock. The project will help to anticipate, absorb and respond to shocks by strengthening household resilience and contributing to social safety nets (capital for work, education on nutrition, small ruminant capital replenishment and micro-projects).
 - the lengthy delays in procurement procedures undermine the absorptive capacity of available funding. PRECIS will benefit from the experience of PRODAF and particularly the support of CNRAT in the field of procurement to anticipate market preparation operations and meet deadlines for implementation.
 - Cultural barriers do not support women and youth's access to productive factors (including land) and hinder their full exploitation of project opportunities. The project's targeting strategy pays particular attention to women and young people. Information, awareness and mediation on the opportunities offered by PRECIS will be one of the

key activities. In addition, the specificity of women and youth and gender equality will be taken into account in the design and will be streamlined during implementation.

- At the fiduciary level, the volume of work in the project's financial function is sufficiently high to require the recruitment of an internal auditor and the strengthening of the CENRAT team.
- A large part of the PRECIS activities will be executed by partner communities or NGOs and related party transactions (real or apparent) may have conflicts of interest. The policies and procedures of PRECIS will clearly define measures to protect the organization from this type of situation.
- In terms of procurement, the major risks are as follows: (i) the centralization of the procurement procedure in Niamey has resulted in a slow procurement process with significant negative impacts on the quality of procurement and financial performance; (ii) according to the national PRODAF procedure, unsuccessful suppliers are informed in parallel to the notification of the successful bidder. In case of withdrawal or failure of the successful bidder, the entire procedure may be resumed with its consequences in costs and delays in the execution of the activity.

Additionally, in case PRECIS encountered challenges that may affect the GCF component, and since PRECIS intervenes in an area where existing successful IFAD funded projects have demonstrated impacts; the GCF component will target PRODAF beneficiaries as a mitigation options.

E.6. Efficiency and effectiveness (max. 1 page)

| | | |
|---|---|---|
| <p>E.6.1. Estimated cost per t CO₂ eq, defined as total investment cost / expected lifetime emission reductions (Mitigation only)</p> | <p>(a) Total project financing (b) Requested GCF amount (c) Expected lifetime emission reductions (d) Estimated cost per tCO₂eq (d = a / c) (e) Estimated GCF cost per tCO₂eq removed (e = b / c)</p> | <p>EUR 11,475,000 EUR 8,500,000 1,606,242 tCO₂eq EUR 11,475,000/ 1,204680 = EUR 7,14 t CO₂eq EUR 8,500,000/1,606,242= EUR 5,29 tCO₂eq</p> |
| <p>E.6.2. Expected volume of finance to be leveraged by the proposed project/programme and as a result of the Fund's financing, disaggregated by public and private sources (Mitigation only)</p> | <p>(f) Total finance leveraged (g) Public source finance leveraged (h) Private source finance leveraged (I) Total Leverage ratio (l = f / b) (j) Public source leverage ratio (j = g / b) (k) Private source leverage ratio (k = h / b)</p> | <p>EUR 2,975,000 EUR 2,125,000 EUR 850,000 __0.35__ __0.25__ __0.1__</p> |

119. GCF financing will overcome the existing barriers to access to financial and non-financial services that hinder the adoption and implementation of best climate change adaptation and mitigation measures (solar energy for agriculture). Additionally, even though BAGRI has been performing quite well over the past years with various loan products, its loans are still not concessional enough to stimulate greater adherence to low emission and climate resilient agriculture. In the energy sector, several bilateral donors have put in place concessional financing schemes that combine grants with credit to promote agricultural and rural finance; they work mainly through MFIs and state-linked financial institutions, such as BAGRI. Early results from these programmes are highly encouraging, although strong oversight and technical assistance (TA) are necessary. This new approach to transform its internal governance and set up a facility with windows is considered innovative and transformational in the context of climate change. Given historic market demand for such loans, BAGRI believes the total proposed GCF facility size (EUR 8.5 million) equivalent will unlock the market and improve both demand and supply. This will stimulate the market and encourage bilateral lending organizations to adopt competitive rates to reduce the risk of crowding out the market. The RoN through BAGRI intends to blend its internal resources with GCF funds to support rural transformation through the adoption and scaling up of implementation of climate resilient agriculture in Niger. Through this project, it is expected to develop a conducive regulatory framework which will sustain this project beyond its duration.

F. ANNEXES

F.1. Mandatory annexes

- Annex 1 NDA No-objection Letter(s)
- Annex 2 Pre-feasibility study (including Theory of Change, project/programme-level log frame, timetable, map, and summary of stakeholder consultation and engagement plan)
- Annex 3 Budget plan that provides breakdown by type of expense (Template in excel sheet)
- Annex 4 Gender assessment and action plan (Template)
- Annex 5 Co-financing commitment letter
- Annex 6 Term sheet and evidence of internal approval
- Annex 7 Risk assessment and management (Template)
- Annex 8 Procurement plan (Template)

F.2. Other annexes to be submitted when applicable/requested

- Annex 9 Economic and/or financial analysis (mandatory for private-sector proposals)
- Annex 10 Legal due diligence (regulation, taxation and insurance)
- Annex 11 Appraisal, due diligence or evaluation report for proposals based on up-scaling or replicating a pilot project
- Annex 12 Environmental and Social Action Plan (ESAP) and Environmental and Social Safeguards risk screening if changed from Part A and B of the concept note submitted.
- Annex xx Other references

* Please note that a funding proposal will be considered complete only upon receipt of all the applicable supporting documents.