



The World Bank

Livestock and Agriculture Modernization Project (LAMP) (P179276)

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Project Information Document (PID)

Appraisal Stage | Date Prepared/Updated: 18-May-2024 | Report No: PIDA0192



BASIC INFORMATION

A. Basic Project Data

Project Beneficiary(ies)	Region	Operation ID	Operation Name
Niger, Niger	WESTERN AND CENTRAL AFRICA	P179276	Livestock and Agriculture Modernization Project (LAMP)
Financing Instrument Investment Project Financing (IPF)	Estimated Appraisal Date 15-May-2024	Estimated Approval Date 28-Jun-2024	Practice Area (Lead) Agriculture and Food
Borrower(s) Ministry of Economy and Finance	Implementing Agency Ministry of Agriculture and Livestock		

Proposed Development Objective(s)

The proposed Project Development Objective (PDO) is to increase productivity, commercialization, and climate resilience of the agri-food sector in the project areas.

Components

- Component 1: Building Resilient Agricultural Productive Capacity
- Component 2: Improving Agriculture and Livestock Markets
- Component 3: Facilitating Access to Finance
- Component 4: Project Coordination and Institutional Strengthening
- Component 5: Contingent Emergency Response Component

PROJECT FINANCING DATA (US\$, Millions)

Maximizing Finance for Development

Is this an MFD-Enabling Project (MFD-EP)? Yes

Is this project Private Capital Enabling (PCE)? No

SUMMARY

Total Operation Cost	400.00
Total Financing	400.00
of which IBRD/IDA	350.00



Financing Gap	0.00
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DETAILS**World Bank Group Financing**

International Development Association (IDA)	350.00
IDA Credit	350.00

Non-World Bank Group Financing

Commercial Financing	47.50
Unguaranteed Commercial Financing	47.50
Counterpart Funding	2.50
Borrower/Recipient	2.50

Environmental And Social Risk Classification

Substantial

Decision

The review did authorize the team to appraise and negotiate

Other Decision (as needed)

B. Introduction and Context

Country Context

- With a GDP per capita of US\$ 654.3 (2022), Niger remains one of the poorest countries in the world. Over 50 percent of the population lives in extreme poverty, of which 95 percent are in rural areas and with significant gender disparities.¹ Niger's Human Development Index for 2021 was 0.4 — which ranks the country at 189 out of 191 countries. Niger also ranks 155 out of 157 countries on the Human Capital Index, with 80 percent of the adult population being illiterate and life expectancy at birth estimated at about 62 years. This situation has been exacerbated by the country's very erratic economic performance.

¹ The UNDP's Gender Development Index (GDI), which measures gender gaps in health, education and living standards, was 0.36 in 2021, in contrast with 0.44 for males, placing Niger among the lowest ranked countries. In 2018, 63.2 percent of Nigerien women were either out of the labor force or in unpaid employment, compared to 32.5 percent of men (World Bank, 2018).



2. **Niger's economic performance is highly volatile because of its high dependence on agriculture which accounts for 44.3 percent of GDP and which in turn exhibits excessive variability.** For instance, overall economic performance fell from 10.5 percent in 2012, down to 1.4 percent in 2021 because of a slowdown in cereal production, before bouncing back up to 11.5 percent in 2022 largely due to improvement in agricultural performance. This random economic oscillation has a particularly negative impact on the poor. In addition, high international prices of energy, fertilizers, and food have disproportionately affected the poor by exacerbating the existing food security vulnerabilities.²

3. **Food and nutrition insecurity is a major concern for Niger.** For instance, recent WFP data shows that more 3.3 million people were classified as acutely food insecure during the 2023 lean season (June-August).³ The Economist Intelligence Unit (EIU) estimated 4.3 million Nigerien to need humanitarian assistance in February 2024. Niger's global acute malnutrition is estimated at 12.7 percent, and 42 percent of children under 5 years are stunted. Several factors—including high fertility rates, low productivity (due to climate-related shocks, droughts, and floods), land degradation and desertification, and conflict—contribute to Niger's food and nutrition insecurity. These factors have been aggravated by the socioeconomic impacts of the recent political crisis and related sanctions, disrupting economic growth, heightening inflation, and leading to increase in extreme poverty rates.

4. **Climate change is projected to exacerbate Niger's current vulnerabilities, especially for those whose livelihoods rely on the agri-food sector.** Niger is one of the most vulnerable countries to extreme droughts, floods, heatwaves, and desertification, resulting in debilitating impacts on crops, livestock, productive infrastructure, and human settlements. Over the past two decades, Niger has faced at least nine major drought events and five major flood events, which have acutely affected the country's rural population and predominantly rainfed agriculture sector. Climate change contributes to the country's food crisis, which, on average, occurs every four years.⁴ Niger is characterized by a hot and arid climate zone where precipitation occurs mostly from May to October, with little to no rainfall during the other times of the year. These conditions are expected to worsen because of climate change, including through longer dry periods and more erratic precipitation patterns. The number of extreme heat events are projected to increase significantly, with a mean temperature increase of around 2-4 degree Celsius by the end of the century.⁵ While future projections on precipitation tend to show high natural annual variability, there is an expected increase by almost 25 percent in the amount of rainfall experienced during the rainy season by the 2050s. Heavy precipitation events are also likely to occur at least twice as many times resulting in significant flood risk.

5. **The above-mentioned chronic and acute climate forecasts will have adverse implications for Niger's agriculture sector, hence for the economy.** Compared to a medium-growth baseline, climate change is estimated to reduce Niger's annual GDP by 2.2 percent by 2050 under the wet and optimistic climate scenarios and by 11.9 percent under the dry and pessimistic climate scenarios.⁶ *First*, given that crop production is predominantly rainfed, yields highly depend on water availability from precipitation and are prone to climate-induced drought. At the same time, the length and intensity of the rainy season is becoming increasingly unpredictable, and the use of irrigation facilities remains limited. Climate change is also expected to introduce agroecological shift affecting crop production whereby yields of heat and drought-sensitive crops are projected to decline. Notably, production of millet, sorghum, maize, and groundnut is predicted to fall by an average of 17 percent, 12 percent, 33 percent, and 16 percent, respectively by the year 2050. *Second*, the livestock sector

² Niger overview, World Bank- September 22, 2022.

³ [WFP - Niger Annual Country Report 2023](#).

⁴ IMF Selected Paper. Economic Effects of Climate Change and Food Insecurity in Niger, 2023

⁵ Niger Country Profile. Climate Change Knowledge Portal (CCKP). Future climate scenarios considered are SSP 3-7.0 (pessimistic scenario) and SSP 2-4.5 (optimistic scenario).

⁶ G5 Sahel Country Climate Development Report (CCDR), 2022



is susceptible to heat stress, which reduces feed intake, reproduction rates, milk production, and longevity. Changing temperature and rainfall trends are expected to impact rangeland productivity, water availability, and exacerbate pest and disease dynamics. *Third*, climate change is likely to damage Niger's roads and agriculture value chain infrastructure affecting agricultural investments, thereby reducing access to inputs and markets, and increasing postharvest losses. These will exacerbate existing vulnerabilities and inadequacies in the current capacity of national agencies and institutions to anticipate and prepare for such emerging threats. These vulnerabilities are further exacerbated by Niger's overall fragility, conflict, and violence, and vice versa.

6. Niger is exposed to multiple risks of fragility, conflict, and violence. Transnational security threats have increased considerably in recent years, with spillover along the borders with Mali, Burkina Faso, Nigeria, and Chad. Niger has also faced endogenous crises and conflicts, including armed groups and intra- and inter-community clashes which have forcibly displaced civilians. As of March 2024, the United Nations High Commissioner for Refugees (UNHCR) estimated a total of 417,000 refugees and 407,000 internally displaced people in the country.⁷ The political crisis since the July 2023 coup d'état, coupled with the sanctions, has exacerbated the risks for local populations. Ensuring that the youth, women, and vulnerable groups are gainfully employed through supporting agriculture (crop and livestock) intensification can reduce poverty and put communities on a trajectory for recovery and economic growth while lowering the incidence of conflicts.

Sectoral and Institutional Context

7. The agriculture (crop and livestock) sector is central to Niger's socio-economic development. It is a major employer, providing jobs to 84 percent of the labor force, many of whom are women and youths. More than 90 percent of Niger's poor households rely on the sector for their livelihoods. Niger has about 2.5 million agricultural households, 95 percent of whom farm less than 3 ha under mixed crop-livestock production systems. The crop subsector is dominated by staples, principally millet (46 percent of total cropped area), cowpea (32 percent), and sorghum (18 percent).⁸ With respect to the livestock subsector, the national herd is estimated at more than 10 million cattle, 24 million small ruminants, 1.5 million camels, and 18.7 million poultry. About two-thirds of the ruminant livestock population is raised under mixed crop-livestock production systems, while the rest is produced under mobile pastoral systems and a few under semi-intensive/intensive production systems.

8. Overall, Niger's agricultural growth has been chronically low and highly volatile. Over the last decade, the sector's growth has averaged 4 percent per annum,⁹ considerably below the 7 to 8 percent annual growth rates often cited as necessary to achieve government objectives with respect to economic growth, employment, food security, and poverty reduction. Additionally, this growth has been volatile mostly due to droughts, floods, and more recently political insecurity, resulting in heavy reliance on food imports to bridge the persistent deficits.¹⁰ This has been accentuated by low levels of agricultural productivity. Average yields of cereals in Niger stand at 0.56 ton/ha against a potential of 4.0 ton/ha, and only 36 percent of the average yields for Sub-Saharan Africa. Similarly, milk, beef, and egg productivity are below potential. Key constraints to improved productivity include: (i) limited access to improved technologies (such as improved seeds and livestock breeds); (ii) reliance on rainfed agriculture; (iii) lack of access to finance; and (iv) high postharvest losses and low value addition, which implicitly undermine profitability and technology adoption.

⁷ <https://data.unhcr.org/en/documents/details/107565>

⁸ Millet and sorghum represent between 80 and 90 percent of the population's caloric intake.

⁹ Mainly driven by an expansion in area under production rather than improvements in Total Factor Productivity (which stood at less than 1 percent per year over the period).

¹⁰ About 72 percent of products are imported



9. **Several demand and supply factors limit widespread use of improved seeds and livestock breeds.** The use of improved seed (i.e., productive and resistant to drought, waterlogging, pests and diseases, or even winds) is estimated at about 10 percent. On the demand side, the cost of improved seed remains out of reach for many smallholder farmers. The government, with support from some of its development partners, has sought to overcome this constraint by purchasing and distributing seed to farmers. However, this approach is likely to stunt the growth of the private sector in developing widespread distribution networks. Seed sector reforms in combination with smart input systems (such as input e-vouchers) that would facilitate farmers' input acquisition and promote private sector growth, and which have been successfully piloted in the country, need to be scaled up. Supply side constraints include inadequate production of foundation seeds that are adapted to market needs so that they can be further multiplied and distributed by the private sector. Other supply-side constraints include inadequate testing for adaptation of promising technologies by local research institutions and the absence of sustainable commercialization channels that facilitate last mile access by small farmers. Regarding livestock, the National Center for Genetic Improvement and the Centers for Multiplication of Highly Performing Animals need to be equipped, teams of inseminators trained, as well as farmers trained on heat detection. Other actions needed include propagating forage production and fodder conservation techniques.

10. **Similarly, low levels of irrigation development are hampering agricultural productivity and climate resilience.** Niger's climate is mostly hot and dry - with a unimodal low and erratic rainfall regime which constrains both crop and livestock productivity and resilience to shocks. Although irrigated agriculture yields are significantly higher than rainfed agriculture yields, just 10 percent (about 210,000 ha out of at least 2 million ha) of Niger's potentially irrigable area is currently under irrigation. With Niger's current irrigation systems being largely inefficient, there is a pressing need to rehabilitate them with water and energy saving irrigation systems. Sustainability of past irrigation investments has been impeded by lack of re-investment into equipment and network maintenance and professional land preparation services.

11. **Credit and lending to agriculture in Niger is very small, both in absolute terms, and as a share of the total bank lending.** According to data from FAOSTAT, the banks' loan portfolio for agriculture amounted to only US\$15.61 million, equivalent to 1 percent of the total outstanding loan portfolio.¹¹ Key constraints include: (i) sector's high perceived risks; (ii) difficulties to provide suitable collateral; and (iii) financial products and services that are ill-suited to farmers' needs, among others. Several credit programs by different actors aimed at filling this void have lacked coordination and a coherent framework. This reluctance of banks and MFIs towards lending has limited farm investments in more productive inputs and services. To this end, the government under the 3N Initiative, initiated in 2017 a unifying financing mechanism, namely the Investment Fund for Food and Nutritional Security (FISAN)¹² with three facilities: *Facility 1*: "*Support for Agricultural Financing*" which supports private investments through credit and other instruments (e.g., guarantees) to leverage financial sector funding; *Facility 2*: "*Financing of Structuring Agricultural Investments*" for supporting infrastructure and other structures of a public and non-profit nature; and *Facility 3*: "*Financing of agricultural advice, applied agronomic research and capacity building*". Since 2021, FISAN has managed a guarantee fund of CFA 1.7 billion (US\$2.8 million equivalent) funded by the GoN, Belgium, France, and Luxemburg. FISAN's efforts are complemented by the Sahelian Financial Company (*SAHFI SA- Société Sahélienne de Financement*) established in 2005 as a joint initiative between the European Union and the State of Niger for providing guarantees to SMEs/SMIs. However, these two institutions need capacity building and additional funds for lending or providing loan guarantees.

¹¹ The agricultural orientation index for credit, which is calculated by dividing agriculture's share of bank lending by agriculture's share of GDP, is the lowest in the WAEMU region.

¹² FISAN was adopted by the Council of Ministers on August 2, 2017, through Decree No. 2017-665/PRN of August 2, 2017.



12. **High postharvest losses, as well as low value addition, hamper profitability and implicitly disincentivize technology adoption, thus undermining productivity and resilience.** Postharvest losses can be very high, especially among vegetables. For instance, onion losses under poor storage can be as high as 30 percent, although with adequate storage this can be reduced to around 5 percent.¹³ Climate change is increasingly a driver of postharvest losses in the country, primarily due to inadequate infrastructure that is not designed to withstand increasing temperatures or flood risks from extreme precipitation events. Climate-resilient storage infrastructure is needed to reduce these postharvest losses as well as to extend the marketing season. Although immediate postharvest sales, often at a very low price, occur to meet urgent family needs, good storage is needed to extend the marketing window, thus generating better prices for farmers. Postharvest infrastructure can facilitate other value adding processes, including drying, de-husking, cleaning, polishing, all of which add value and incentivize investments in productivity enhancing technologies. They can also enhance access to short-term finance through Warehouse Receipt Systems and other commodity-based financing mechanisms. With respect to livestock, milk collection and preservation centers are critical constraints. There is need to improve postharvest infrastructure and integrate them into inclusive and commercially competitive value chains managed by dynamic and innovative local SMEs and farmer organizations.

13. **Limited diversification and agro-processing are increasingly placing Niger's agricultural offerings out of sync with the evolving market demand.** The structure of Niger's agriculture has changed very little over the last three decades. As indicated earlier, millet, sorghum, and cowpea occupy 96 percent of cultivated area. Similarly, the agriculture sector is characterized by limited and underdeveloped value-addition and agro-processing. Yet, the growing urban and export markets require a different mix of products, including rice, fresh products, good quality meat and generally more high quality and processed products. Considering that the availability of good quality land in Niger is limited, diversification into new products without jeopardizing food security will require increasing the productivity of current staples to maintain food security, while releasing land for other crops and animal fodder. In addition, diversification – especially for year-round vegetable production – will require irrigation development and good storage infrastructure to reduce postharvest losses that are much higher in fruits and vegetables. Producing for an increasingly health-conscious market also requires adequate food safety standards and reliable market information systems for a constant feedback loop between consumers and producers. Agro-processing activities (such as slaughterhouses, dairy processing, rice mills) face major infrastructural limitations and lack a consistent supply of raw materials (as over 85 percent of the agricultural produce is for home consumption), indicating the need for increasing agricultural productivity and marketable surplus.

14. **There are considerable gender gaps in Niger's agriculture sector.** Women managed farm plots are 19 percent less productive than plots managed by men.¹⁴ This is largely attributed to Nigerien women having lower access to agricultural inputs such as improved seeds, fertilizers, pest control inputs, improved storage of perishable products, training and technologies, feed and veterinary services, and finance compared to men. Furthermore, women have limited time of their own farm activities because of their household obligations. According to the 2017 Systematic Country Diagnostic (SCD) for Niger, 34 percent of Nigerien women are out of the labor force as opposed to 10 percent of men, and those employed receive lower earnings. In addition, women are generally concentrated at the lower levels of the value chains (e.g., weeding, irrigation, harvesting, and minimal processing).

C. Proposed Development Objective(s)

¹³ Étude sur la chaîne de valeur oignon au Niger, FAO 2021

¹⁴ Country Partnership Framework (CPF) for Niger (FY18-22)



Development Objective(s) (From PAD)

The proposed Project Development Objective (PDO) is to increase productivity, commercialization, and climate resilience of the agri-food sector in the project areas.

Key Results

- (i) Area provided with new/improved irrigation or drainage services (ha) – Corporate Results Indicator CRI
- (ii) Increased yield of targeted agriculture and livestock products in Program areas (%)
- (iii) Percentage increase in the volume of targeted agriculture and livestock products sold by beneficiary households (%)
- (iv) Number of people with enhanced resilience to climate risks (% of which are female) – New Corporate Scorecard

D. Project Description

15. **The project approach is based on the following core principles:** (i) geographic concentration of investments in selected production basins to maximize impact that can crowd-in future economic activities. The selected areas for Phase 1 are in the regions of Dosso, Diffa, Maradi, Tahoua, Tillaberi, and Zinder (see map in Annex 8); (ii) targeting value chains identified as key priorities for the country, namely rice, onion, cowpea, and livestock – including live animals, meat, and dairy (see Annex 2 for details). These were selected considering the following criteria: (a) proven existing market demand and existing distribution channels; (b) high growth and poverty reduction potential; (c) relevance to priorities expressed in government development policies;¹⁵ and (d) prospects for success. Considering the key role women and youth play in all segments of the selected value chains, the project will strive to address gender gaps and will especially facilitate access by women and youth to productive resources, extension information, innovative technologies, and credit; (iii) targeting a series of activities that self-reinforce for amplified results. Fundamental transformation of agricultural systems requires a simultaneous pursuit of the critical constraints along the targeted value chains. In this case, increased productivity, enhanced system resilience to climate change, improved postharvest management, greater diversification, market development, and access to finance reinforce each other and are, therefore, better pursued and accomplished together; and (iv) seeking to achieve the largest possible dissemination of technologies that are already tested in the Sahel region to achieve sustainable impact.

16. **In addition, the project builds on and complements several past and current operations.** With respect to irrigation and water access, the Project builds on lessons learned from the Sahel Irrigation Initiative Support Project (PARIIS, P154482), the Niger Integrated Water Security Platform Project (P174414), and the Niger Climate Smart Agriculture Support Project (P153420). With respect to livestock development, it builds on lessons learned from the Regional Sahel Pastoralism Support Project (PRAPS, P173197). The Project will seek geographic co-implementation with the Niger Accelerating Electricity Access Project (P174034) to facilitate access of supported farmers and other value chain actors to energy for certain activities such as irrigation and postharvest handling. It will also seek geographic co-implementation with the Rural Mobility and Connectivity Project (P164498) and the Southern Niger Connectivity and Integration Project (P179770) to facilitate access to markets. To facilitate access to finance, the Project draws lessons from Bank financed projects in a similar context, including the Madagascar Financial Inclusion Project (P161491), Burkina Faso Financial Inclusion Support Project (P164786), and Guinea Financial Inclusion (P173304). In addition, the Project will build

¹⁵ The selection of target geographic areas and value chains is based on the priorities of several value chain studies and the Niger Country-level Food and Agriculture Delivery Compact recently presented as part of the High-Level Summit of Heads of States on Feed Africa - Dakar Declaration on Food Sovereignty and Resilience (Dakar 2) (January 2023).



on the West Africa Food Systems Resilience Program (FSRP, P172769) regarding approaches to resilience of Niger's agriculture and food systems.

17. **In view of all the above, the project is designed along three interrelated technical components:** (i) Building Resilient Crop and Livestock Productive Capacity; (ii) Improving Crop and Livestock Markets; and (iii) Facilitating Access to Finance. A fourth component will focus on Project coordination and institutional strengthening for the ministry of Agriculture and Livestock. The Project includes a zero funded Contingent Emergency Response Component (CERC).

Component 1: Building Resilient Agricultural Productive Capacity (US\$250 million of IDA)

18. **This component's objective is to sustainably increase crop and livestock productivity, strengthen farmers' resilience to climatic shocks, and diversify agricultural production.** Project support under this component is organized around three subcomponents - one focusing on the crop subsector, the other targeting support to the livestock subsector, and a subcomponent on applied agricultural research. Each of these subcomponents contribute to climate co-benefits, as detailed in Annex 6.

Subcomponent 1.1: Support to Improved Crop Productivity and Climate Resilience (US\$215 million)

19. **This subcomponent will be led by the Ministry of Agriculture and Livestock (MOAL) and will focus on:** (i) improving access to improved seeds/germplasm; (ii) improving access to irrigation; and (iii) organizing and strengthening local producers in the targeted value chains for technology transfer purposes.

20. **To enhance access to improved (drought-tolerant) seeds/germplasm, the Project will finance:** (i) vouchers to farmers to be redeemed for improved certified seed with the desired climate smart agriculture characteristics; (ii) advisory services to farmers and farmers' organizations (FOs) on the selection and proper utilization of improved certified seeds; and (iii) improvements in seed quality control and certification, and in coordinating national seed demand and supply (e.g., providing demand forecasts to guide suppliers). It will support certified drought-tolerant seeds that are able to withstand high temperatures while advisory services will guide farmers on selecting appropriate seeds and on ensuring optimum productivity. The Project will also support seed sector reforms to expand private sector participation in production and distribution of improved seeds. This will include institutional strengthening of the National Seed Committee and the official seed control and certification structure (*Direction du Contrôle et de la Certification des semences (DCCS)*) to transform it into a National Agency for Seed Control and Certification.

21. **Regarding irrigation, the Project will support irrigation development for crop and fodder production.** This includes (a) 9,900 ha of small-scale irrigation (new: 7,900, rehabilitation: 2,000 ha), of which 4,200 ha is expected to be developed by the private sector, and (b) 8,200 ha of medium and large scale irrigation (new: 5600 ha, rehabilitation: 2600 ha). The medium and large scale irrigation will be principally developed for rice production (using surface water resources). The small scale, shallow groundwater-based irrigation systems (not exceeding 10 meters deep), will principally be for onion, cowpea, and rice production. As appropriate, other highly remunerative systems, such as low cost protected farming for fruits and vegetables will also be financed. All irrigation developments will be designed with a strong focus on innovative technologies that use renewable energy and efficient water conveyance systems. The MOAL has launched studies to further define irrigation investments in line with the National Rice Development Strategy (SNDR) and the Irrigation Promotion Strategy (*SPIN - Stratégie de Promotion de l'Irrigation au Niger*). The Project will assess and support, where relevant, new models for irrigation implementation including Pressurized Distribution networks (PDN), Community Irrigated Farms (CIF), and Farmer Led Irrigation Development (FLID), drawing on IFC's experience in the region. The Project will adopt a framework approach whereby investments will be selected on an ongoing and dynamic basis in accordance



with set criteria, such as land tenure status, community participation, technical preparation, sustainability, and environmental and social considerations. The Project Implementation Manual (PIM) will detail the framework approach to identify interventions (see Annex 3).

22. The Project will support the Government to develop a price reference system for the main materials and equipment used in irrigation, thereby improving the governance and procurement of irrigation development. This reference system will be an integral part of the national price reference system (established and implemented by the Government in accordance with Order No. 0055/MEF of 15 March 2012), which is currently under revision. The reference price framework will guide the Government and its partners to better execute future irrigation developments and will serve as a basis for development partners to finance irrigation development in the country. The Project support includes feasibility studies, detailed designs, environmental and social impact studies, management plans, infrastructure development, trainings, supports to agricultural inputs and the establishment/strengthening of WUAs to ensure sustainable operation and maintenance of the irrigation systems. The irrigation infrastructure will incorporate climate considerations in their design. Rehabilitating existing irrigation infrastructure will also reduce leakages and improve water availability, and efficient water use will build drought adaptive capacity and climate resilience. To expedite project implementation, LAMP will build on and update existing studies done for the PARIIS and Kandadjii project.

23. The Project will support TA for: (i) organizing and strengthening the management and business skills of farmer organizations; (ii) training member farmers on different aspects of increasing agricultural productivity by utilizing Paris aligned CSA practices and to improve postharvest management; and (iii) promoting digital technologies and extension services. Producer organizations like RECA will play a key in aggregation of farmers to benefit from the irrigation development. Leading FOs could participate in trainings through IFC's Agribusiness Leadership Program, with the objective of a transition to "Farming as a business" and private sector participation for financing under component 3.

Subcomponent 1.2: Support to Improved Livestock Productivity and Climate Resilience (US\$30 million)

24. This subcomponent will be led by MOAL and will primarily focus on sedentary livestock production systems (cattle, sheep, goats, and poultry), complementing the Regional Sahel Pastoralism Support Project (PRAPS, P173197) which focuses on the pastoralist system. The Project will support investments aimed at improving meat and dairy production. Project activities will focus on: (i) genetic improvement to increase adaptation to heat and other stressors, maximize feed conversion and minimize enteric fermentation, and increase livestock productivity, all of which will contribute to the Paris Alignment's objectives; (ii) increased fodder and feed production; (iii) greater access to water; and (iv) improved advisory services to increase farmers adoption of good animal husbandry services. While overall animal health services are addressed under the PRAPS, the proposed project will finance sector reforms to create incentives for private sector veterinary networks (SVVPs) to expand their coverage to remote areas and communities. This will result in a revised Guideline for Public-Private Partnership in veterinary service provision.

25. For genetic improvement, the Project will support: (i) building, rehabilitating, and equipping artificial insemination (AI) and breed improvement centers (such as the Centre de Multiplication du Bétail (CMB) and other breeding units); (ii) training of technical staff on AI; (iii) public and private provision of AI services to ensure farmers access to improved genetic resources; (iv) training farmers on heat detection; and (v) the distribution of high-performance male sheep and goats to women groups for breed improvement of small ruminants (e.g., with respect to adaptation to high temperatures and disease risks).



26. **The project will:** (i) support sustainable production and distribution of improved drought-tolerant fodder seeds; (ii) promote production of *bourgou* on saline soils¹⁶; (iii) promote rangeland management and feed preservation techniques including hay and silage production; and (iv) train farmers on improved livestock feeding practices (which support adaptation and reduce enteric methane emissions).

27. **The project aims to enhance access to water for animals through:** (i) the rehabilitation and construction of water points; (ii) establishment and training of water management committees to ensure their maintenance.

28. **To support farmers to improve their animal husbandry practices, the project will:** (i) for ruminants, finance training for farmers on proper animal housing, feeding, hygiene, animal welfare, etc.; (ii) for poultry (layers and broilers), support prospective commercial investors through financial mechanisms under Component 3. In addition, the project will finance activities to reduce mortality including awareness campaigns, training on safeguards and reporting protocols to fight the spread of avian influenza, and promotion of low-cost supplemental feeding practices; and (iii) strengthen the poultry disease surveillance system. The breeding project will focus on genetic improvements to increase adaptation to heat, disease risks, improve productivity while contributing to reduced emissions (see Annex 6).

Subcomponent 1.3: Support to Applied Agriculture Research (US\$5 million)

29. **The objective of this subcomponent is to facilitate rapid availability of climate smart technologies for enhancing productivity, adaptation, and resilience to climate change.** This subcomponent will be led by the National Agricultural Research Council (CNRA), which coordinates all agriculture research and development across different institutions in the country, and the National Institute of Agronomic Research of Niger (INRAN). It will primarily deal with crop-related research as pertinent animal-related research is being handled under the FSRP.

30. **The main activities to be financed include:** (i) ramping up the multiplication of foundation seed of climate smart seeds (with higher productivity and other desirable features of moisture stress tolerance, fast-maturity, pest and disease resistance, etc.) to enable local seed companies to scale up seed production; (ii) testing for local adaptation of germplasm sourced regionally and from various centers of excellence, and releasing the suitably adapted materials for local multiplication and distribution; (iii) testing innovations and crop management practices that enhance water use efficiency, conserve soil moisture and improve soil quality, improve carbon sequestration, ensure safe and effective plant protection – including integrated crop pest management systems, enhance nutrient/fertilizer use efficiency, among others, for immediate release and use by farmers; and (iv) development of AgTech applications and services, including remote sensing tools, communication links between research and field users, support to data collection and analysis, and monitoring climate effects on agricultural productivity. These climate-resilient breeding programs and adaptive trials, climate smart and crop management practices will contribute to climate adaptation and mitigation (see Annex 6).

Component 2: Improving Agriculture and Livestock Markets (US\$30 million of IDA)

31. **This component aims to improve market access and competitiveness of selected agriculture and livestock value chains.** The project will finance: (i) critical and climate resilient market infrastructure; (ii) building of food safety and sanitary and phytosanitary (SPS) capacity; and (iii) mobilizing transformative private investors and strengthening market advisory and information services. All project financed infrastructure will follow climate-resilient and energy-efficient design standards (e.g., reliance on solar power as an energy source and on water harvesting as the main source of water

¹⁶ Bourgou is a fodder plant that attenuates salinity and makes the soils suitable for other crops after 2 to 3 production campaigns.



for livestock). Activities will focus on climate proofing of priority market infrastructure and prioritize energy efficiency considerations contributing to climate adaptation and mitigation (see Annex 6 for details).

Subcomponent 2.1: Supporting priority market infrastructure (US\$26 million)

32. **Project support under this subcomponent focuses on financing critical market infrastructure** to reduce postharvest losses, extend the “marketing season” of agriculture and livestock products, and reduce multiple layers of intermediary aggregators through greater consolidation, hence enhancing market efficiency and competitiveness. These investments will be based on a needs assessment to be conducted during the first year of implementation. The market infrastructure will be managed by semi-public or private companies (cooperatives, interprofessionals, agribusinesses) that would operate the infrastructure under concession arrangements with the Government.¹⁷ In partnership with IFC, the project will support regular consultations with agribusinesses engaged in the targeted value chains.

33. **For the selected crop value chains, the project will specifically finance:** (i) construction of suitable (cool, dry, and well-ventilated) storage facilities, energy efficient warehouses, and equipment for processing; (ii) establishment of standards and guidelines for onion quality, sorting, storage, preservation, and packaging; (iii) building energy-efficient rice mills to be operated by cooperatives and farmers’ organizations in collaboration with the private sector;¹⁸ and (iv) technical assistance to strengthen the capacity of FOs, cooperatives, federations of FOs, women led farmer groups, and SMEs that participate in the selected value chains (for instance, the National Association of Onion Industry Professionals (ANFO) and its regional federation in Tahoua).

34. **For the livestock value chain, the project will finance:** (i) common assets for milk value addition such as milk collection and cooling centers, in coordination with industrial processors; (ii) the completion and operationalization of the abattoir in Maradi;¹⁹ (iii) training to all actors of these value chains (including pastoralists, herders, and businesses) to strengthen compliance with strict health standards, in collaboration with the livestock/dairy/meat associations (such as the Collective of Pastoral Associations of Niger – CAPAN, the Association for the Revitalization of Livestock in Niger – AREN, the National Federation of Breeders of Niger (FNEN/DADDO), and the Nigerien Association of Milk Interprofessional Federations – ANFILAIT). These interventions will be designed with climate and energy-efficiency considerations.

Subcomponent 2.2: Strengthening food safety and sanitary and phytosanitary (SPS) capacity (US\$2 million)

35. **The objective of this activity is to strengthen institutional capacity to ensure food quality and safety.** This will entail strengthening the General Directorate for Plant Protection and the General Directorate of Veterinary Services under MOAL to perform sanitary inspections and risk-based disease surveillance and control programs, and to ensure food safety in line with global and regional standards.

36. **The project will support:** (i) capacity building of responsible agencies to conduct regular and periodic assessment of quality and safety risks in selected agri-food value chains, including risks of pesticide and veterinary drug residues (this will be preceded by a capacity needs assessment to understand the gaps, and to design appropriate solutions); (ii) capacity building of responsible agencies to conduct regular and periodic animal disease surveillance such as Avian Influenza and contagious bovine pleuropneumonia; and (iii) assessment of risk monitoring and evaluation systems. Capacity

¹⁷ Evidence on large wholesale markets show that above 80 percent of the market infrastructures world-wide are under public or semi-public ownership whereas 55 percent of the market management is conducted by private or semi-public companies.

¹⁸ Niger’s current milling efficiency stands at 65 percent, leaving room to improve milling efficiency and reduce postharvest loss, which can reduce GHG emissions as co-benefits.

¹⁹ The abattoir, which was supported by the Niger Climate Investment Support Project (P14889), was not completed by the time that the project closed. According to the MOAL, construction works are ongoing by the Government.



strengthening will include training and awareness raising on climate risk and impact as well as interconnectedness of climate change, animal health, and food safety. The project's support to surveillance will contribute to improved detection and surveillance to respond to the transmission of infectious disease linked to higher temperatures and changes in patterns and intensities of precipitation events.

Subcomponent 2.3: Mobilizing transformative private investors (US\$2 million)

37. **The objective of this subcomponent is to mobilize private investors with technical and financial capacity that will develop the project supported value chains.** Such private investments will be essential along the key nodes of the value chains – e.g., irrigation, development and distribution of key inputs, transformation, digitalization of value chains, market infrastructure, logistics and access to markets. This will increase the impact of these private investments through linkages with local farmer associations, SMEs, and investors. Such transformative private investors will be crowded-in through de-risking facilities under component 3. The project will finance: (i) mapping of potentially transformative private investors, (ii) mapping of land areas where such investors could invest, and (iii) prefeasibility studies for the main opportunities identified. If successful under Phase 1, these private investors will play a larger role in the subsequent phases and will be key sources of private capital to the sector.

38. **This activity will also create market linkages along the selected value chains. The project will:** (i) finance the establishment of industry dialogue platforms to facilitate interactions between producers and downstream value chain actors (together with IFC); (ii) facilitate partnerships between farmers and other value chain actors (warehouse owners, processors, wholesalers, and traders), including through contract farming; and (iii) support the development and dissemination of quality standards. It will also build the capacity of selected producers and processors to raise awareness and compliance with the quality requirements for target markets. The project will assess the potential for scaling up of digital-enabled aggregators, in partnership with IFC, in Niger. The Chamber of Agriculture (CRA) under MOAL will be responsible to implement this activity.

Component 3: Facilitating Access to Finance (US\$47 Million of IDA)

39. **The objective of this component is to increase access to financial services for the agriculture and livestock sectors.** Specifically, the project will enable access to credit enhancement grants and guarantees for commercial loans from local financial institutions for value chain participants (private producers, agribusinesses, FOs) to improve access to production inputs and services, value addition infrastructure and equipment, and markets. The project will utilize FISAN and SAHFI to deliver financial services to project beneficiaries. The project will also support TA to these two institutions to improve their performance, as well as to other participating financial institutions to develop financial products and services that are more suitable for agriculture clients. One of the financial products to be promoted is warehouse receipt financing, to take advantage of the warehouses to be constructed under the project. The sub-projects and other financed activities under this component contribute to climate co-benefits, as detailed in Annex 6.

Subcomponent 3.1: Sub-project financing (US\$45 million).

40. **Financing through FISAN (US\$ 25 million).** This will be in the form of Credit Enhancement Grants (CEGs) managed under FISAN's Facility 1. The design of the CEGs will be described in the Operations Manual, which will be a supplement to the PIM, clarifying the financing process, the size of grants, and the selection criteria, among others. The investment support mechanism through the CEGs will have two separate windows. Window 1²⁰ (from US\$50,000 to US\$200,000) will target small to medium investments by individuals (especially women and youth), producer groups (with SMEs), traders,

²⁰ Besides the size brackets, the differences between Windows 1 and 2 is the share of the grants, which is smaller for subprojects under Window 2.



processors, and service providers. The project will first provide TA to build their organizational and financial management skills and their production systems and commercial capacity, before they access the funding.²¹ Window 2 (from US\$200,000 to US\$500,000) will target larger investments by lead agribusiness SMEs and FOs. The Project will finance investments aimed at increasing their production capacity, energy and operation efficiency, including orienting their operations towards more climate resilient systems, and integrating smallholder producers into their operations (such as capacity building to producers/ suppliers to adopt CSA technologies, quality improvement of their produce, etc.).

41. **Financing through SAHFI (US\$ 20 million).** This endowment will be a separate guarantee trust fund within SAHFI, independent from other funds under SAHFI management and SAHFI's capital. Funds will be disbursed to SAHFI in tranches according to the volume of credits registered under the guarantees. The fund endowment is expected to have a multiplier effect on participating financial institutions' (PFI) number of loans. For this project, SAHFI will scale up the existing partial portfolio credit guarantee (PPCG) fund, as done successfully in other WB supported projects in Madagascar, Burkina Faso, and Guinea.²² A subsidiary agreement will be signed between SAHFI and the project, to set guidelines on the use of WB funding including selection criteria for the financial intermediaries and the borrowers to be served. Regular PPCG will be offered on credit to firms participating in the agricultural value chains covering up to 70 percent of the credit risk. As in the case of the CEGs, an Operations/Procedural Manual, will be developed to clarify the financing process, size of the guarantees, and the selection criteria, among others. Assessment of SAHFI's capacity to receive project funds has been conducted and conditions are met as deemed necessary (see Annex 5).

Subcomponent 3.2: Technical Assistance for FISAN, SAHFI, and PFIs (US\$2 million)

42. **The objective of this subcomponent is to strengthen the performance of the two key institutions that are the cornerstones of financial access schemes to the agri-food sector in Niger, namely FISAN and SAHFI.** The subcomponent will also sharpen PFIs' skills in agricultural lending. In collaboration with IFC, the project will also support FISAN, SAHFI, and the PFIs to adopt innovative approaches to agriculture equipment acquisition (e.g., equipment leasing, climate risk mitigation through crop and zone-specific index insurance services).

43. **For FISAN, the project will strengthen its expertise in critical areas, such as mainstreaming climate adaptation and mitigation aspects.** These will also include irrigation, rural engineering, crop and livestock production, agribusiness, fiduciary, environmental and social safeguards, and gender. The project will also improve FISAN's overall management, governance, and organizational framework, as well as strengthen its ability to support financial institutions in designing financial products that are more suitably adapted for agriculture and livestock development. It will also strengthen its analytical capacity (such as ability to assess market failures, regulatory weaknesses and inadequacies and discern the pertinent reforms needed to guide the support to its clients to implement their subprojects).

44. **In the case of SAHFI, the TA will develop SAHFI's capacity in:** (i) developing and implementing policies to include MFIs in addition to banks; (ii) developing and implementing policies through a procedural manual to assess and manage guarantees issued to cover portfolios of loans (as opposed to individual loans); (iii) accompanying and supporting its activities to issue and manage guarantees for loans to agricultural value chains; and (iv) complying with the World Bank's ESS9. In addition, the TA will contribute to enhancing the quality of SAHFI's services and financial performance. The TA is expected to help: (a) improve cost-effectiveness, (b) reduce transaction costs for guaranteed institutions, (c) increase growth of guaranteed portfolios, and (d) bring positive operational results. In the case of the PFIs, the project (in

²¹ RECA will play a key role in aggregation of small-scale producers to have a critical mass and to reduce monitoring costs.

²² LAMP draws lessons from the implementation of the PPCG under the Madagascar Financial Inclusion Project (P161491), Burkina Faso - Financial Inclusion Support Project (P164786), and Guinea Financial Inclusion (P173304)



collaboration with IFC), will provide TA to help them design financial products that are suitable to their agricultural clients (disbursements, repayment structures, maturity periods, etc.). The project will support the development and acquisition of a digitized loan processing system with end-to-end secured monitoring, which will reduce delay and increase transparency of the financing process. FISAN will manage such a platform with possible access for the PFIIs to process and pre-approve loans. The platform will provide periodic reports and tracking options for all loan requests and will constitute a database of borrowers. SAHFI will also have an interface to the platform and ensure the guarantees are applied.

45. **The project will hire a private implementation firm to build FISAN's capacity to efficiently manage the CEG mechanism.** The PMU will lead the terms of reference and procurement process of the firm. The firm will ensure, among other things: (1) build capacity of the FISAN, (2) develop the request for proposal (RFP) for the CEGs, and (3) lead the technical review of the subproject selection.

Component 4: Project Coordination and Institutional Strengthening (US\$23 million of IDA)

46. This component will focus on all aspects of overall project management, including fiduciary and safeguards aspects, Monitoring and Evaluation (M&E), knowledge management, and communication. It will also address critical cross-cutting institutional strengthening and training needs identified. It has two subcomponents.

Subcomponent 4.1. Support to Project Coordination, Monitoring and Evaluation (US\$15 million)

47. **The objective of this subcomponent is to ensure effective and transparent project management and M&E systems.** The project will finance: (i) the operational costs for project management both at central and regional level; (ii) monitoring and implementing the requirements of the Bank's Environmental and Social Framework (ESF); (iii) monitoring and evaluation (M&E); (iv) communication and knowledge management of project activities; (v) citizen engagement activities and the project's grievance redress mechanism, among others.

Subcomponent 4.2: Support to Institutional Strengthening (US\$8 million)

48. **Under this subcomponent, the project will support activities aimed at:** (a) improving the long-term capacity of the MOAL and its agencies to promote sector growth, including ONAHA, ministry of hydraulics, FISAN, and CRA, and (b) institutional strengthening of the ministry for improved coordination for the development and implementation of long-term sectoral strategies. Activities to be financed by the project include: (i) strengthening extension and the technical backstopping capacity of Government staff at all levels, filling the identified human resource gaps by financing higher technical qualifications of appropriate staff; (ii) establishing a rigorous M&E and Management Information Systems (MIS) and in their coordination with other ministries; (iii) support the capacity of the ministry to establish an effective fiduciary system for project funds management; and (iv) support institutional coordination for the implementation of government programs and to create awareness on climate change.

Component 5: Contingent Emergency Response Component (CERC) (US\$0)

This component will enable the government to quickly mobilize funds in the event of an emergency that requires immediate response.



Legal Operational Policies	Triggered?
Projects on International Waterways OP 7.50	Yes
Projects in Disputed Area OP 7.60	No
Summary of Screening of Environmental and Social Risks and Impacts	

The overall project implementation will be coordinated by the Niger Ministry of Agriculture and Livestock (MOAL). The MOAL has vast experience in the implementation of regional and national projects financed by the World Bank, under the Bank's Operational Policies and the ESF, such as: (i) the Niger Project Climate Smart Agriculture Support (P153420) with a satisfactory Overall Safeguards Rating in the last two years of the project (closed in December 2022); (ii) the Sahel Irrigation Initiative Support Project (PARIIS; P154482; overall safeguards rating in October 2023 was Moderately Satisfactory); (iii) the Niger Agricultural and Livestock Transformation Project (PIMELAN; P164509 – closed in May 2023 with an overall safeguards rating of Satisfactory); (iv) the West Africa Food System Resilience Program (FSRP; P172769; overall safeguards rating in February 2024 was Moderately Satisfactory); and (v) the Regional Sahel Pastoralism Support Project II (PRAPS II, P173197; overall safeguards rating in January 2024 was Moderately Satisfactory). However, some weaknesses remain, especially with regards to the Borrower's capacity to manage grievance mechanisms, labor, sexual exploitation and abuse/harassment (SEA/H) risks, stakeholder engagement and supervision challenges in remote areas. To further enhance capacities, especially with regards to the implementation of additional requirements of the ESF, the Bank team will provide relevant targeted training and capacity reinforcement to strengthen the Borrower's capacity, as reflected in the ESCP. Furthermore, the project implementation unit will include a safeguards team comprised of environmental and social specialists at national and regional (Dosso, Diffa, Maradi, Tahoua, Tillaberi, and Zinder) levels; a GBV Specialist and a Security Specialist will also be recruited at the national level.

For the financial intermediaries component, a rapid assessment of the environmental and social capacities has been undertaken of the "Societe Sahélienne de Financement" (SAHFI). To meet ESS9 requirements, SAHFI will put in place and maintain an Environmental and Social Management System (ESMS) to identify, assess, manage, and monitor the environmental and social risks and impacts of the subprojects on an ongoing basis (see also ESS 9 for more details on this).

E. Implementation

Institutional and Implementation Arrangements

49. The project will be implemented under the overall leadership and oversight of a National Project Steering Committee (NPSC), comprised of Ministry of Economy and Finance (MEF) and MOAL. The committee will also include representatives of the private sector, FOs, and civil society so they contribute to good governance and voice their concerns as needed. The main responsibilities of the NPSC include: (i) advise the project on strategic directions and supporting activities; (ii) approve the Annual Work Plan and Budgets (AWPB); and (iii) review Implementation Progress Reports (IPRs)



and advise on the effectiveness of ongoing activities and any adjustments needed in the AWPB. A Project Implementation Manual (PIM) and Operational Manual (OMs) for the CEGs and PPCGs will be prepared before project effectiveness.

50. A Project Management Unit (PMU) will be established and attached to the Ministry responsible for Agriculture and Livestock under its General Secretariat. It will comprise a central unit as well as decentralized units to enable closer monitoring of activities' implementation on the ground and interactions with local authorities, decentralized government agencies, partners, and contractors involved. The PMU will establish agreements with governmental agencies and institutions mandated to carry out the project activities. These agencies and institutions will directly implement project activities according to a well-defined plan outlined in each agreement. This will ensure seamless integration of project implementation into the ministry's overall strategy. Drawing from lessons learned from PRAPS and FSRP, where some project activities faced implementation bottlenecks, particularly those delegated to other government agencies lacking capacities or commitment, the contracting of a small technical team directly linked to the PMU will be made at the regional level to support government agencies and institutions. The Government will appoint within the ministry of agriculture or recruit a Coordinator and technical staff financed under IDA. Core staff will include a Project Coordinator, technical specialists for each component at the central level, fiduciary specialists (including a financial specialist and accountants at both central and decentralized levels, as well as one or two procurement specialists), safeguards specialists (comprising one social specialist and one environmental specialist), a gender/VBG specialist, security specialist, monitoring and evaluation specialists (one at the central level and one per decentralized unit), sub-coordinators in each decentralized unit (usually appointed and financed by the government), and communication specialists.

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