THE WORLD BANK
IBRD • IDA | WORLD BANK GROUP

FOR OFFICIAL USE ONLY

Report No: PAD3319

INTERNATIONAL DEVELOPMENT ASSOCIATION

PROJECT APPRAISAL DOCUMENT
ON A
PROPOSED CREDIT

IN THE AMOUNT OF SDR 39.1 MILLION
(US$50.00 MILLION EQUIVALENT)

TO THE

ISLAMIC REPUBLIC OF MAURITANIA

FOR AN

AGRICULTURE DEVELOPMENT AND INNOVATION SUPPORT PROJECT

October 27, 2022

Agriculture and Food Global Practice
Western and Central Africa Region

CURRENCY EQUIVALENTS

(Exchange Rate Effective September 30, 2022)

Currency Unit =		Mauritanian Ouguiya
MRU 37.7 =		US$1.00
US$ 1.279880	=	SDR 1

FISCAL YEAR
January 1 - December 31

Regional Vice President:	Ousmane Diagana
Country Director:	Nathan M. Belete
Regional Director:	Simeon Kacou Ehui
Practice Manager:	Chakib Jenane
Task Team Leaders:	Mohamed Fadel Hammady, Christophe Frederic Robert Grosjean

ABBREVIATIONS AND ACRONYMS

ABCP	Africa Business Climate Plan
AGLC	*Association de Gestion Locale Collective des Ressources Naturelles* (Association for the Local Collective Management of Natural Resources)
AM	Accountability Mechanism
APIM	*Agence de Promotion des Investisssement en Mauritanie* (Agency for Promotion of Investments in Mauritania)
AWPB	Annual Work Plan and Budget
BAU	Business-As-Usual
CAIE	*Centrale d'Approvisionnement en Intrants d'Elevage* (Livestock Input Purchasing
CCC	*Comité Communal de Concertation* (Commune Coordination Committees)
CERC	Contingent Emergency Response Component
CF	*Cellule chargée du Foncier* (Land Unit)
CIG	Common Interest Investment Group
CNLAA	*Centre National de Lutte Anti-Acridienne* (National Locust Control Center)
CNRADA	*Centre national de Recherche Agronomique et de Développement Agricole* (National Center for Agricultural Research and Agricultural Development)
COVID-19	Coronavirus disease 2019
CPF	Country Partnership Framework
CRDs	*Comités Régionaux de Développement* (Regional Development Committees)
CSA	Climate-Smart Agriculture
DAAF	*Direction des Affaires Administratives et Financières* (Directorate of Administrative and Financial Affairs)
DAR	*Direction de l'Aménagement Rural* (Directorate of Rural Development)
DDFAP	*Direction de Développement des Filières Animales et du Pastoralisme* (Directorate of Development of Animal Sectors and Pastoralism)
DDFCA	*Direction de Développement des Filières et du Conseil Agricole (*Directorate of Development of the Agricultural Subsectors and Extension Services*)*
DGPPP	Direction Générale des Partenariats Publiques-Privés *(General Directorate of Public Private Partnership)*
DSCSE	*Direction des Stratégies, de la Coopération et du Suivi-évaluation (*Directorate of Strategies, Cooperation and Monitoring and Evaluation)
DSSIA	*Direction des Statistiques et des Systèmes d'Informations Agropastorales* (Directorate of Statistics and Agropastoral Information Systems)
DSV	*Direction des Services Vétérinaires* (Directorate of Veterinary Services)
ENFVA	*Ecole Nationale de Formation et de Vulgarisation Agricoles* (National School for Agricultural Training and Extension)
E&S	Environmental and Social
ESCP	Environmental and Social Commitment Plan
ESF	Environmental and Social Framework
ESIA	Environmental and Social Impact Assessment
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plan
ESRS	Environmental and Social Review Summary
ESS	Environmental and Social Standard

FAO	Food and Agriculture Organization
FM	Financial Management
GBV	Gender-Based Violence
GDP	Gross Domestic Product
GHG	Greenhouse Gas
GIE	*Groupement d'Intérêt Economique* (Economic Interest Group)
GIZ	*Gesellschaft für Internationale Zusammenarbeit* (German Development Agency)
GRM	Grievance Redress Mechanism
GRS	Grievance Redress Service
HDI	Human Development Index
IBRD	International Bank for Reconstruction and Development
ICRR	Implementation Completion and Results Report
IDA	International Development Association
IFAD	International Fund for Agricultural Development
IFC	International Finance Corporation
IFPRI	International Food Policy Research Institute
IGA	Income Generating Activity
IPF	Investment Project Financing
LOA	*Loi d'Orientation Agropastorale* (Agropastoral Orientation Law)
LMP	Labor Management Plan
M&E	Monitoring and Evaluation
MHS	Ministry of Hydraulics and Sanitation
MoA	*Ministère de l'Agriculture* (Ministry of Agriculture)
MoE	*Ministère des Affaires Economiques et Secteurs Productifs (*Ministry of Economic Affairs and Productive Sectors)
MoESD	Ministry of Environment and Sustainable Development
MOEL	Ministry of Livestock
MoF	*Ministère des Finances (*Ministry of Finance)
MRU	Mauritania Ouiguya
NDC	Nationally Determined Contribution
NGO	Non-Governmental Organization
NTFP	Non-Timber Forest Products
OIE	*Organisation mondiale de la santé animale* (World Organization for Animal Health)
ONARDEL	*Office National de Recherches et Développement de l'Elevage* (National Office for Research and Development of Livestock)
PADISAM	*Projet d'Appui au Développent et à l'Innovation de l'Agriculture en Mauritanie*
PARIIS	*Projet d'appui régional à l'initiative d'irrigation au Sahel (*Sahel Irrigation Initiative Regional Support Project)
PDO	Project Development Objective
PDL	*Plan de development Local (Local Development Plan)*
PDRC	*Projet de Développement Rural Communautaire* (Community-based Rural Development Project)
PIM	Project Implementation Manual
PMU	Project Management Unit
PNDA	*Plan National de Développement de l'Agriculture* (National Agriculture Development Plan)
PNDE	*Plan National de Développement de l'Elevage* (National Livestock Development
PP	Procurement Plan

PPA	Project Preparation Advance
PPP	Public-Private Partnership
ProGRN	*Programme de Gestion des Ressources Naturelles (*Natural Resources Management Program)
PSC	Project Steering Committee
PSRP	Poverty Reduction Strategy Paper
RAI	Responsible Agricultural Investment
RPF	Resettlement Policy Framework
SCD	Systematic Country Diagnostic
SCAPP	*Stratégie de Croissance Accélérée et de Prospérité Partagée* (Accelerated Growth and Shared Prosperity Strategy)
SDSR	*Stratégie de Développement du Secteur Rural* (Rural Sector Development Strategy)
SEA/SH	Sexual Exploitation and Abuse/Sexual Harassment
SEP	Stakeholders Engagement Plan
SLM	Sustainable Land Management
SMAE	Small and Medium Agri-Entrepreneurs
SME	Small and Medium Enterprise
SMPL	*Société Mauritanienne de Produits Laitiers* (Mauritanian Dairy Products Company)
SNAAT	*Société Nationale de l'Aménagement Agricole et des Travaux (*National Society forAgricultural Planning and Works)
SNAG	*Stratégie Nationale d'Amélioration Génétique* (National Strategy for Genetic Improvement)
SNSA	*Stratégie Nationale de Sécurité alimentaire* (National Food Security Strategy)
SONADER	*Société Nationale pour le Développement Rural* (National Society for Rural Development)
SPG	Small Grants Program
SWS	Sub- Watersheds
TA	Technical Assistance
UN VGGT	United Nations Voluntary Guidelines on Governance of Land Tenure
US$	United States Dollar
WAAPP	West Africa Agricultural Productivity Program
WFP	World Food Program
ZOCA	*Zones d'Opportunité de Croissance Agricole* (Agricultural Growth Opportunity Zone)

TABLE OF CONTENTS

DATASHEET

BASIC INFORMATION

Country(ies)	Project Name	
Mauritania	Mauritania Agriculture Development and Innovation Support Project	
Project ID	Financing Instrument	Environmental and Social Risk Classification
P168847	Investment Project Financing	Substantial

Financing & Implementation Modalities

[ ] Multiphase Programmatic Approach (MPA)	[✓] Contingent Emergency Response Component (CERC)
[ ] Series of Projects (SOP)	[ ] Fragile State(s)
[ ] Performance-Based Conditions (PBCs)	[ ] Small State(s)
[ ] Financial Intermediaries (FI)	[ ] Fragile within a non-fragile Country
[ ] Project-Based Guarantee	[ ] Conflict
[ ] Deferred Drawdown	[ ] Responding to Natural or Man-made Disaster
[ ] Alternate Procurement Arrangements (APA)	[ ] Hands-on Enhanced Implementation Support (HEIS)

Expected Approval Date	Expected Closing Date
17-Nov-2022	30-Jun-2028
Bank/IFC Collaboration	Joint Level
Yes	Complementary or Interdependent project requiring active coordination

Proposed Development Objective(s)

To improve land resource management and foster inclusive and sustainable commercial agriculture in selected areas of Mauritania.

Components

Component Name	Cost (US$, millions)
Community-Driven Territorial Development and Preservation	17.50

Inclusive Commercial Agriculture	27.50
Project Management and Monitoring & Evaluation	5.00
Contingency Emergency Response to Crisis (CERC)	0.00

Organizations

Borrower:	Islamic Republic of Mauritania
Implementing Agency:	Ministère de l'Agriculture

PROJECT FINANCING DATA (US$, Millions)

SUMMARY

Total Project Cost	50.00
Total Financing	50.00
of which IBRD/IDA	50.00
Financing Gap	0.00

DETAILS

World Bank Group Financing

International Development Association (IDA)	50.00
IDA Credit	50.00

IDA Resources (in US$, Millions)

	Credit Amount	Grant Amount	SML Amount	Guarantee Amount	Total Amount
Mauritania	50.00	0.00	0.00	0.00	50.00
National Performance-Based Allocations (PBA)	50.00	0.00	0.00	0.00	50.00
Total	**50.00**	**0.00**	**0.00**	**0.00**	**50.00**

Expected Disbursements (in US$, Millions)

WB Fiscal Year	2023	2024	2025	2026	2027	2028
Annual	4.00	6.50	13.00	12.00	8.50	6.00
Cumulative	4.00	10.50	23.50	35.50	44.00	50.00

INSTITUTIONAL DATA

Practice Area (Lead)

Agriculture and Food

Contributing Practice Areas

Climate Change and Disaster Screening

This operation has been screened for short and long-term climate change and disaster risks

SYSTEMATIC OPERATIONS RISK-RATING TOOL (SORT)

Risk Category	Rating
1. Political and Governance	Moderate
2. Macroeconomic	Moderate
3. Sector Strategies and Policies	Substantial
4. Technical Design of Project or Program	Substantial
5. Institutional Capacity for Implementation and Sustainability	High
6. Fiduciary	Substantial
7. Environment and Social	Substantial
8. Stakeholders	High
9. Other	Substantial
10. Overall	Substantial

COMPLIANCE

Policy

Does the project depart from the CPF in content or in other significant respects?

[ ] Yes [✓] No

Does the project require any waivers of Bank policies?

[ ] Yes [✓] No

Environmental and Social Standards Relevance Given its Context at the Time of Appraisal

E & S Standards	Relevance
Assessment and Management of Environmental and Social Risks and Impacts	Relevant
Stakeholder Engagement and Information Disclosure	Relevant
Labor and Working Conditions	Relevant
Resource Efficiency and Pollution Prevention and Management	Relevant
Community Health and Safety	Relevant
Land Acquisition, Restrictions on Land Use and Involuntary Resettlement	Relevant
Biodiversity Conservation and Sustainable Management of Living Natural Resources	Relevant
Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities	Not Currently Relevant
Cultural Heritage	Relevant
Financial Intermediaries	Not Currently Relevant

NOTE: For further information regarding the World Bank's due diligence assessment of the Project's potential environmental and social risks and impacts, please refer to the Project's Appraisal Environmental and Social Review Summary (ESRS).

Legal Covenants

Sections and Description

The Recipient shall, no later than one (1) month after Effective Date, establish and thereafter maintain a steering committee (the "Project Steering Committee") with terms of reference, composition and resources acceptable to the Association.

Sections and Description
The Recipient shall maintain the management unit (the "Project Management Unit" or "PMU") in the office of the MoA, with organization and resources acceptable to the Association and staff in adequate number (in the views of the Association), each with terms of reference, qualification and experience acceptable to the Association.

Sections and Description

No later than one (1) month after the Effective Date, the Recipient shall recruit for or assign to the PMU: (A) one (1) coordinator, (B) one (1) administrative and financial manager, (C) one (1) procurement specialist, (D) one (1) environmental specialist, and (E) one (1) social development specialist.

Sections and Description
No later than three (3) months after the Effective Date, the Recipient shall recruit for or assign to the PMU : one (1) matching grant specialist.

Sections and Description
No later than three (3) months after the Effective Date, the Recipient shall develop and adopt the manual for the implementation of the matching grants (the "Matching Grant Manual").

Conditions

Type	Financing source	Description
Effectiveness	IBRD/IDA	The Recipient has established a management unit for the Project in the office of the MoA, and recruited for such unit: (i) a cordinator, (ii) a social safeguard specialist, (iii) an environmental safeguards specialist, (iv) a procurement specialist, and (v) a financial management specialist,
Type	Financing source	Description
Effectiveness	IBRD/IDA	The Recipient shall develop and adopt the manual for the implementation of the Project, PIM.
Type	Financing source	Description
Disbursement	IBRD/IDA	No withdrawal shall be made under Category 2 unless and until; (i) the Matching Grant Manual has been adopted (ii) a matching grant specialist has been recruited ; and (iii) at least one (1) Matching Grant Agreement has been signed with a Beneficiary in accordance with the procedures described in and on the basis of the template

		attached to the Matching Grant Manual.
Type Disbursement	Financing source IBRD/IDA	Description No withdrawal shall be made for Emergency Expenditures under Category (3), unless and until: (i) (A) the Recipient has determined that an Eligible Crisis or Emergency has occurred, and has furnished to the Association a request to withdraw Financing amounts under Category (3); and (B) the Association has agreed with such determination, accepted said request and notified the Recipient thereof; and (ii) the Recipient has adopted the CERC Manual and Emergency Action Plan, in form and substance acceptable to the Association and is in compliance with all its obligations under the CERC Manual and Emergency Action Plan at the time of the application for the withdrawal of funds.

I. STRATEGIC CONTEXT

A. Country Context

1. **Mauritania is essentially a desert country, with vast expanses of pastoral land and only 0.5 percent of arable land.** The population is about 4.6 million (2020), and the density of 4 inhabitants per square kilometer makes Mauritania one of the least densely populated countries in the world. Further, more than half of Mauritanians (53 percent) live in urban areas (2017). The transhumance and semi-nomadic livestock production is predominant in the rural areas while sedentary agriculture (both irrigated and dryland) is mainly concentrated along the Senegal River in the south and the south-eastern regions of the country. Natural resource wealth (mainly iron ore, crude oil, and natural gas) boosted Gross Domestic Product (GDP) per capita to US$1,702 in 2010, up from US$722 in 2005, lifting Mauritania into the ranks of Lower- Middle-Income Countries (LMICs).

2. **COVID-19 severely impacted the economy, leading to a growth contraction of 1.8 percent in 2020.** In 2021, growth recovered to 2.3 percent, fueled by a strong extractive sector and fewer containment measures. The annual average inflation increased from 2.4 percent in 2020 to 3.6 percent driven by food prices which contributed 2.9 percentage points to the index in 2021. The medium-term outlook is broadly favorable[1]. Growth is projected to increase to 4.5 percent in 2022. This is lower than the pre-pandemic level (5.8 percent) and the potential (5.5 percent). In per capita terms, growth will average 3.3 percent for 2022-24, as per pre-pandemic average (3.4 percent for 2016-2019). Despite some fiscal pressures in 2021, as the authorities' ramped-up social and investment spending to support a resilient recovery, the fiscal position is expected to remain strong over the outlook period (2022-2024). Public debt is sustainable, but the risk of debt distress remains high. The outlook is subject to several risks including an emergence of new COVID-19 variants, sustained inflationary pressures, climatic hazards, delayed structural reforms, and regional insecurity.

3. **The war in Ukraine poses a risk to poverty reduction.** The poverty rate (using the low-middle income poverty line of $3.2/day in 2017 PPP) has been estimated at 25.9 percent in 2020 and projected to slightly decline to 25.4 percent by 2024. The stabilization of inflation and the maturity of the social protection reforms in response to COVID-19 are expected to reduce poverty. However, the Russian-Ukrainian war suggests caution on this perspective. The significant rise in world food prices since the start of the conflict (at least a third of food products are imported) could considerably affect the consumption of Mauritanian households. Food security is a challenge for a sizeable share of Mauritania's population in both rural and urban areas, especially when facing droughts. Furthermore, the recent increase in fuel prices decided by the authorities in July 2022 has led to a negative impact on households' access to basic services and this is not expected to improve over the short-term period. To mitigate this impact and to ensure access to food to the most vulnerable segment of the population, the Government opened a network of stores offering the minimum basic needs throughout the country with fixed prices. The Southern regions, which are expected to benefit from the proposed project, are the most nutrition and food insecure areas in the country.

4. **Although it has improved in recent years, Mauritania's business and regulatory environment remains difficult for the private sector.** Several challenges constrain the business environment, including heavy State involvement, lack of competition, mismanagement and rent seeking. Even when the economy

[1] *https://www.worldbank.org/en/country/mauritania/overview*

has been increasingly deregulated over the last decade and the economic/legal environment substantially reformed, the strict regulation imposed by the Government through the licensing regime, creates a heavy burden for the private sector, particularly Small and Medium Enterprises (SMEs). Moreover, an oligopolistic market structure dominated by certain elites makes the market entry more difficult. In the agriculture sector, the lack of access to land due to failure to recognize land rights is also an important impediment. As a result, growth in private sector investment, although steady, has been slow in the recent years.

B. Sectoral and Institutional Context

5. **The agriculture sector plays a key role in the economic development of Mauritania.** The sector generates about 25 percent of national GDP and provides employment to 51 percent of the population. The livestock subsector accounts for 75 percent of agriculture GDP and has been one of the most important drivers of poverty decline in the past years[2]. The sector has grown more slowly than the overall economy with an average growth rates of 1.5 percent per year over the 2015-2019 period. As a result, the bottom 40 percent of Mauritanians predominantly remain rural livestock and agricultural producers.

6. **Mauritania has a relatively important, but largely untapped agriculture potential predicated on its substantial land and water resource endowment.** However, a large fraction of the country's cultivable land is currently not exploited or under-exploited due to several factors such as inadequate land governance (Box 1), lack of water, and inefficient practices and technologies. According to the Ministry of Agriculture (MoA), there are around 530,000 ha of farmland that could be developed with an irrigable area of about 135,000 ha under full or partial irrigation if: (i) proper land use modalities are agreed with local communities currently benefiting from the land; (ii) irrigation water is provided; and (iii) productive technologies are introduced for large scale and/or intensive production.

Box 1: Land tenure challenges facing the development of the agriculture sector in Mauritania

Land tenure insecurity is relatively high in Mauritania, as many rights holders are unable to register their land individually or collectively. Customary tenure is widely common in rural areas but not legally recognized. To facilitate development and overcome the traditional and highly hierarchical tenure system, the Government introduced major land sector reforms in the 1980s. Under Ordonnance 83.127 of 5 June 1983, all land was declared state owned except for land registered to individuals, or granted as a deed of concession, or permanently developed. The successive implementing decrees of this ordinance adopted between 1984 and 2000, have invested the territorial administrative authorities, in particular the Walis (governors) and the Hakem (prefects), with broad powers to manage public lands in both urban and rural areas. During this period, land governance was largely characterized by overlapping jurisdictions and even abuses in the individual access to land. However, a 2010 decree addressed these issues and centralized the authority of land allocation, especially rural, which was given to the Minister of Finance and the Council of Ministers. This strong centralization of decision-making and the absence of a national land register or cadastral plan has however resulted in new challenges; for example, leading to the attribution of large areas to sometimes foreign developers, attributions which were described as land grabbing by local communities. The advent of the new development vision under the Government's agriculture development strategy (para. 12) makes it possible to support improved land governance and use; for instance, mobilizing the arable land potential as a source of shared wealth, stability, and development. To achieve this goal, land tenure is planned to be dealt with by all parties involved, prominently by the local communities. In this fashion, the Government aims to consolidate social cohesion and create conditions favorable to development and responsible investment in the agriculture sector, guaranteeing the inclusion of rural households.

[2] *Islamic Republic of Mauritania: "Turning Challenges into Opportunities for Ending Poverty and Promoting Shared Prosperity", Systematic Country Diagnostic (SCD), World Bank Group, 2017.*

7. **Limited attention has been paid to rainfed areas over the past decades.** Driven by a food security policy anchored on the principle of self-sufficiency, agriculture public spending in Mauritania has been, in its vast majority, oriented towards irrigated areas for rice production along the Senegal river valley as well as (to a lesser extent) the milk value chain. Meanwhile, Mauritanian drylands have benefited only from limited public spending, essentially in the form of hundreds of small and medium scale water management infrastructures. Top-down state-driven planning combined with insufficient resources, weak capacity of local governments to fulfill their mandates compounded by challenging local conditions and insufficient engagement with local communities, have led to rapid infrastructure dilapidation in most of the cases. Based on a field survey by the Ministry of Hydraulics, it is estimated that 80 percent of water management infrastructure are officially in need of rehabilitation (with 50 percent considered totally ruined or not functional).

8. **Due to several factors, productivity in the agriculture sector is low.** With production dispersed across vast areas, low population density and poorly articulated value chains, agricultural services delivery remains weak and uneven across Mauritania. Access to financial services is almost non-existent for most smallholders. Additionally, the sector has barely benefitted from technological innovation, spanning from improved seeds to post-harvest technologies through improved agricultural practices. The National Center for Agronomic Research and Agricultural Development (CNRADA) is resource-constrained and is now devoid of a cadre of trained researchers. Consequently, research on drought resistant dryland crops is nearly inexistent yet the sector is highly impacted by climate change. The lack of research is compounded by weak institutions resulting in poor knowledge delivery on the ground. The provision of extension services also remains limited in scope, quality, and time (often linked to externally funded time-bound projects) and private advisory service providers are absent. The deconcentrated services of both MoA and the Ministry of Livestock (MoL) lack capacity and adequate resources, and, hence, the allocative efficiency and service provision gains anticipated from the decentralization process have not yet materialized.

9. **Vulnerability to climate change compounds Mauritania's agriculture development challenges.** Mauritania is vulnerable to climate change due to its location along the Sahel, the desert climate of the Sahara, and its socioeconomic characteristics. While 75 percent of the country is part of the Sahara and largely uninhabited, 25 percent lies within the semi-arid Sahel. The Sahel is impacted by climate change through increased temperatures and related heat waves, and higher variability of precipitation. Mauritania is at a risk of water scarcity due to increased temperatures resulting in increased evaporation of surface waters and reduced runoff, increased competition over scarce water resources as well as limited infrastructure. Climate change is also likely to shift agro-ecological zones affecting crop production, while increased temperatures and water stress may increase crop failure. The vulnerability of Mauritania's infrastructure to climate risk may also contribute to climate-induced disruptions, and limit access to agricultural inputs or markets.

10. **Although women play an essential role in agriculture, they have limited access to land, credit, agricultural advisory services, and other productive assets.** Mauritanian women are involved in all phases of the agricultural cycle, including planting, weeding, protection, maintenance of fields, harvesting, conservation, storage, processing, and marketing of produce. However, as producers, women have limited access to land (only 18.7 percent of landowners are women) and other productive assets. Moreover, they have difficulty accessing credit from formal banking institutions as they do not own land and other collateral. Women's access to credit is primarily through traditional savings. Their access to extension services or their participation in agricultural training is also limited. The proposed

project aim at improving women's access to technical training, income-generating activities, extension, water supply, and appropriate technologies.

11. **To address the challenges facing the agriculture sector, the Government of Mauritania has adopted a set of strategies in support of the sector.** The national Strategy for Accelerated Growth and Shared Prosperity (SCAPP), the overarching Government strategy for inclusive and sustainable economic growth, is translated at sector level into the National Agricultural Development Program (PNDA) (2015-2025) and the National Livestock Development Program (PNDE) (2018-2025). The PNDA (2015-2025) puts emphasis on promoting Climate-Smart Agriculture (CSA) as an integrated approach to managing landscapes to help adapt agricultural methods, livestock and crops to climate change while also increasing agricultural productivity. It also recognizes that water management and the maintenance of hydro agricultural infrastructures is a very important issue. Regarding food security and resilience, the National Food Security Strategy (SNSA, 2012) puts emphasis on the multi-dimensional and multi-sectoral nature of food security. Regarding improving landscapes and better harnessing water resources for agriculture, Mauritania is a member of the Sahel Irrigation Initiative and signed the Dakar Declaration through which the country has committed to scale up investments in water resources management[3].

12. **These strategies are complemented by the Government's new vision for making better use of agricultural and pastoral lands.** Under this new vision, the objective is the rational development of land resources with a fourfold focus: (i) ***socio-political***: the need to recognize traditional land rights with the view to reinforcing social cohesion and national unity; (ii) ***economic***: the aim of achieving greater food self-sufficiency through import substitution and generating additional foreign exchange through agricultural exports; (iii) ***technical***: the need to introduce new, more productive technologies and practices for rational exploitation of the land; and (iv) ***social***: the necessity to permit all categories of the Mauritanian population, including the landless and vulnerable groups, to have access to land resources, hence reducing income disparities and alleviating rural poverty. The above vision is reflected in a strategy with two basic pillars: (a) the first pillar aims at supporting local community development with a focus on small-scale agriculture, social investment, and poverty alleviation at the grassroots; and (b) the second pillar is based on the development of Agriculture Opportunity Growth Zones (ZOCAs)[4] through productive and intensive use of land by large scale farms in association with existing smallholders. These two pillars are expected to revive agriculture in selected areas of Mauritania, with the goal of reducing the deficit of foodstuffs on the domestic market and generating export to niche markets, as well as preserving and sustaining environmental resources[5].

13. **The proposed project supports government objectives under the PNDA, PNDE, its strategy for development of land resources, as well as its commitment to scale up investments in water resources management as captured in the Dakar Declaration.** Specifically, the project will support community-

[3] *The Sahel Irrigation Initiative was launched by six Sahelian countries coordinated by the Permanent Interstate Committee for Drought Control in the Sahel (CILSS), supported by the regional economic communities and the World Bank. It comes in the wake of the 2013 Dakar Forum on Irrigation in the Sahel, which ended with the adoption of a Declaration by the Governments of Senegal, Burkina Faso, Mali, Mauritania, Niger, and Chad and their partners. The Declaration recommended ensuring "that all hydro-agricultural developments be based on appropriate sectoral strategies, which are integrated in a value chain approach and based on a rational and sustainable use of available resources".*

[4] *By its French acronym: 'Zone d'Opportunité de Croissance Agricole' (ZOCA)*

[5] *The new vision was publicly launched by the Minister of Economy in June 2021 in one of the target areas (ZOCA) followed by a formal communication during a council of ministers and materialized by an inter-ministerial circular to all governors. Based on that, an inter-ministerial land resources committee was appointed in January 2022 to oversee the process. In addition, a strategic note on the roll-out of the ZOCAs was elaborated and adopted.*

led territorial development and conservation as well as inclusive agriculture commercialization to drive productivity gains, improved food security, increased resilience, improved ecosystem functioning, and incomes of beneficiaries. The proposed project builds on other World Bank-financed projects in Mauritania and in the region, including: (i) the Regional West-Africa Agricultural Productivity Project (WAAPP, P122065) which contributed to boost productivity small-scale farming in the region; (ii) the Regional Sahel Pastoralism Support Project (PRAPS1-P147674 and PRAPS2-P173197) supporting access to essential productive assets, services and markets for pastoralists in selected trans-border areas and along transhumance axes across six Sahel countries; (iii) the Senegal River Basin Climate Change Resilient Development Program Phase 2 (PGIRE 2, P131323) which aimed at increasing the productive use of water while safeguarding the health and livelihoods of vulnerable communities in the Senegal River Basin; (iv) the Regional Sahel Irrigation Initiative Support Project (PARIIS, P154482) which improves stakeholders' capacity to develop and manage irrigation and increase irrigated areas using regional solutions across participating Sahelian countries; and (v) the Sustainable Landscape Management Project (SAWAP, P144183) which aimed at improving the sustainable use of land and water resources, taking into account both production, and ecosystem service functions within the larger landscape.

C. Relevance to Higher Level Objectives

14. **The proposed Mauritania Agriculture Development and Innovation Support Project (PADISAM)[6] is fully aligned with the current CPF (FY18-FY23 - Report No. 125012-MR) for Mauritania.** The CPF support the transition to a more inclusive, diversified and resilient model of growth, building on Mauritania's natural resource wealth. The Project contributes to the CPF focus area on expanding opportunities for economic diversification with interventions to raise productivity in traditional livestock, fisheries, and agricultural activities; improves household welfare through access to basic services; and enables increased participation in economic activity which will further sustain growth. It contributes specifically to Objective 1.2 of "Increasing agriculture and livestock production in the face of climate change". It also aims at increasing resilience, accelerating adaptation to climate change and expanding opportunities for economic diversification.

15. **Maximizing Finance for Development.** The Project acknowledges the key role of the private sector for commercial agriculture development in Mauritania. It supports a set of results aimed at removing constraints to private investment in the agriculture sector, with a focus on facilitating the development of Agricultural Growth Opportunity Zones (ZOCAs). In these zones, the project will implement a spectrum of actions for maximizing finance for development (MFD) to remove key commercial agriculture-related obstacles, hence increasing private sector investment. These actions include: (i) promoting responsible agriculture investments by supporting private sector alignment with the principles of inclusive investment and business models to improve linkages among smallholders and agri-firms of all sizes; (ii) clarifying the governance structure of the ZOCAs in line with international best practices; and (iii) investing in critical infrastructure within the ZOCAs to reduce private sector transaction costs and risks, and help increase private sector activity and investment in agricultural value chains.

16. The project also supports the UN Sustainable Development Goals (SDGs) and the Bank's Africa Business Climate Plan (ABCP). The project contributes to four SDGs: (i) end poverty in all its forms everywhere; (ii) end hunger, achieve food security and improved nutrition, and promote sustainable agriculture; (iii) promote sustained, inclusive, and sustainable economic growth, full and productive employment, and

[6] *PADISAM by its French acronym: Projet d'Appui au Développement et à l'Innovation du Secteur Agricole en Mauritanie.*

decent work for all; and (iv) take urgent action to combat climate change and its impact. As it will have a strong focus on CSA, the project will contribute to rolling out the approach adopted under ABCP which aims at adapting and building resilience of agriculture and food systems to climate change and reducing Greenhouse Gas (GHG) emissions from agriculture.

II. PROJECT DESCRIPTION

A. Project Development Objective

17. **The PDO** is to improve land resources management and foster inclusive and sustainable commercial agriculture in selected areas of Mauritania.

18. **The PDO-level results indicators are:** (i) Land area under sustainable landscape management practices (number of hectares); (ii) Farmers reached with agriculture assets or services (number, disaggregated by gender); (iii) Increase in productivity of key targeted crops (disaggregated between rainfed and within the ZOCA areas) (metric tons per hectares); and (iv) Direct project beneficiaries (number disaggregated by gender).

B. Project Components

19. **Along the twin pillars of the Government's new agricultural development strategy, the project has two distinct but complementary technical components**: (i) *Component 1 – Community-driven territorial development and preservation*, focusing on restoring the productive capacity of the agriculture base and the resilience of people in selected SWSs; and (ii) *Component 2 - Inclusive commercial agriculture,* focusing on intensive large-scale production under irrigated conditions in ZOCAs. *Component 3* consists of overall project management, monitoring and evaluation (M&E) activities, and *Component 4* is a zero-allocation Contingency Emergency Response Component (CERC).

CONCEPTS UNDERLYING PROJECT DESIGN

20. ***Core principles of territorial development and preservation.*** Project support to territorial development and preservation follows a watershed approach based on participatory landscape planning, that respects land rights and considers the needs of all stakeholders in the sub-watershed units. Under this approach, the project will develop the local communities' overall knowledge of water and land management and increase the ownership and sustainability of the project investments. As such, the approach will contribute to making beneficiary communities more resilient to climate change as they will have the capacity to adapt the landscape plans as needs evolve. The conceptual approach relies on a combination of three main elements: (i) rehabilitation of the productive capacity of land resources that support the development of Income-Generating Activities (IGAs)[7]; (ii) an institutional support to strengthen the capacity of government agencies (primarily MoA and associated entities) to deliver

[7] *The enterprises of interest will include: (i) CSA and livestock related primary activities such as horticulture, animal fattening, forage/fodder production, poultry production, milk production that enhance farmer's resilience and reduce GHG emissions; (ii) other off-farm activities including the marketing or simple processing (e.g., drying, bagging or packaging) of traditional products (e.g., cereals as millet, sorghum or cowpea, fodder, horticultural products, milk and other animal products); (iii) innovative or diversification activities (e.g., harvesting and packaging gum Arabic, producing oils or powders for medicinal or cosmetic purposes); or (iv) the provision and sale of basic agri-related services such as crop treatment services, the rental of equipment, the sale of inputs (fertilizers, multiplication and sale of improved vegetable and animal seeds, etc.), transportation or storage.*

the necessary agricultural support services and plan appropriate responses, as a cross-cutting measure; and (iii) a range of livelihood opportunities tailored to the needs of household groups and the communities to whom they belong, in relation to addressing the specific needs of key vulnerable groups (particularly women and youth).

21. ***Core principles of Agricultural Growth Opportunity Zone (ZOCA) development.*** The commercial agriculture development in ZOCA perimeters under Component 2 is predicated on the establishment of Public Private Partnerships (PPPs) between the Government, private investors, and local communities to develop productive land and water resources for the purpose of agribusiness. Under these partnerships, investors will develop large-scale commercial farming in the core areas of the ZOCA perimeters and offer opportunities to Small and Medium Agri-Entrepreneurs (SMAEs) in surrounding areas to be part of the developed value chains. Agreements underlying the PPPs will ensure that the communities involved can: (i) decide whether to make land available for investment or not, based on their own informed choices; (ii) secure sustained and well-defined benefits; (iii) receive fair compensation for the land (including common areas) and natural resources that they make available for investment; and (iv) be able to hold the Government and the investors accountable for their commitments. These agreements will be guided by the Principles for Responsible Agricultural Investment (RAI/Committee on World Food Security-CFS) as well as the United Nations Voluntary Guidelines on Governance of Land Tenure (UN VGGT)[8]. The Government is committed to adhering to these principles. The project will draw lessons from the pilot operations focusing on rural lands being undertaken under the Bank-supported Public Governance Project (P165501) in that area[9].

22. The choice of the pilot ZOCA perimeter(s) to be developed and the subsequent negotiation of the PPP(s) will be made along a go/ no-go decision-making process with decisions based on an assessment of both the agro-physical and socio-economic characteristics of the ZOCA block(s)[10]. This decision-making process will be undertaken upfront and will require some lead time, meaning that actual investments are likely to be implemented with a time lag. The development of the ZOCA perimeter(s) into a PPP program will be piloted in selected sites and follow an existing national legal framework under the General Directorate of Public Private Partnership (DGPPP). As a supporting measure, Component 2 will also strengthen the government capacity (primarily the Ministry of Economy and the Promotion of Productive Sectors and the Ministry of Agriculture - and their decentralized territorial administrations) to promote, oversee and monitor implementation, and deliver attendant investment support and services, for the ZOCA program. Finally, the project will work closely with DGPPP and Agency for the Promotion of Investments in Mauritania (APIM)t to identify and attract interested private investors into the ZOCA program[11].

[8] *See: (https://www.fao.org/fileadmin/templates/cfs/Docs1314/rai/CFS_Principles_Oct_2014_EN.pdf) and (https://landportal.org/voluntary-guidelines).*

[9] *Mauritania: Public Sector Governance Project, Additional Financing and Restructuring (P165501) which helps improve monitoring and transparency of selected government entities and the administration of property and mining taxation.*

[10] *The Government, in consultation with stakeholders, has already pre-identified six sites for further analysis and possible development as ZOCA blocks (Bababé, Thiénel-Boghé and Dar El Barka in the Brakna region, Aftout Nord, Aftout Sud, and Tekane in the Trarza region).*

[11] *IFC is exploring the possibility of providing support to APIM in outreach and facilitation of investments.*

COMPONENT 1 – COMMUNITY-DRIVEN TERRITORIAL DEVELOPMENT AND PRESERVATION (US$17.5 MILLION EQUIVALENT)

23. This component will enhance agriculture sustainability under changing climatic conditions and strengthen resilience of beneficiary rural households in selected rainfed areas of Mauritania. This will be achieved through a combination of climate-smart investments to: (i) rehabilitate and enhance the productivity of selected landscapes by rehabilitating small-scale water management infrastructure and investing in soil conservation and restoration as well as afforestation; (ii) support producers' to tap into the productive potential of the rehabilitated landscapes by promoting access to CSA technologies and services; and (iii) augmenting the economic base of rural households in the project area by supporting IGAs and facilitating entrepreneurial activities that enhance resilience. The planning and selection of investments will be climate-informed and rely strongly on a participatory planning process, conducted at the sub-watershed level, and which engages local communities to express their needs and priorities. The component will also strengthen the capacity of institutions involved to sustainably manage natural resources with a focus on the MoA and affiliated entities. It will include activities focused on the specific needs of women and youth (Annex 4 provides details on Gender Actions per Component).

24. **Sub-Component 1.1: Planification and restoration of targeted Sub-watersheds (US$9.8 million).** SC 1.1 will restore and further develop land resources in selected Sub-watersheds (SWS)as well as accelerate adoption of climate-resilient agriculture practices on this newly productive foundation. Comprehensive sub-watershed level landscape restoration and productivity enhancement plans will be prepared and aligned with local needs and specificities[12]. Their preparation will be facilitated by mobilizing communities and government technical services in combination with *ad-hoc* technical expertise as needed. Plans will include engaging communities to understand how modern and traditional knowledge and practices can play a role in shaping resilient agriculture practices that enhance climate resilience and reduce greenhouse gas emissions. These plans will include the rehabilitation and upgrading of water management structures, to address their vulnerabilities to climate change impacts. Small-scale irrigation systems will be introduced to help deal with changing climate variability and optimizing water-related system performance, and implementation of erosion control works, and environmental restoration and afforestation to enhance climate resilience. The project will follow climate-resilient design standards on the proposed small-scale irrigation and related infrastructure. Those specific investments have a high potential to reduce vulnerabilities to climate shocks, hence increasing resilience. To capture mitigation opportunities, the project will improve watershed functions through activities that restore the soil carbon pools (in particular, afforestation), develop a long-term watershed conservation and restoration plan that results in sustainable soil aggregation/reforestation of target areas and develop guidelines on watershed management and erosion control. SC 1.1 will finance the following activities:

a) *Preparation of SWS plans including*: (i) inventorying and mapping the landscape components to be constructed, rehabilitated, and upgraded; (ii) establishing plans for environmental restoration and agriculture productivity enhancement; and (iii) developing social agreements for the future maintenance and use of restored landscapes. The sub-component will finance Technical Assistance (TA) services as needed for that purpose;

b) *Investments of collective interest,* involving*:* (i) detailed technical studies associated with the

[12] *The development of comprehensive SWSs plans has been carried out under the Project Preparation Advance.*

restoration and enhancement of degraded landscapes to support adaptation planning, climate-risk management and carbon sequestration; and (ii) rehabilitation/ upgrading of physical infrastructure to address climate vulnerabilities as identified and confirmed in the sub-watershed plans. Considering the potential impacts of climate change, the project will climate-proof and adapt physical infrastructure to the adverse effects of flooding and drought. Works will be contracted to civil works companies or organized through community-led arrangements when suitable[13]; and

c) *Advisory support and provision of basic technical packages*: This activity will involve: (i) the production of extension material centered on the promotion of climate-smart crop practices adapted to the targeted areas; (ii) the delivery of extension activities (through farmer field schools-FFSs, including the use of ICTs) and services (including plant protection services) to enhance climate adaptation; and (iii) the provision of packages of climate-smart agricultural inputs including improved genetic material (drought-resistant seeds that are adapted to Mauritania's climatic conditions), and small equipment and tools to producers. As applicable, energy efficiency and other climate mitigation considerations will be implemented for investments related to small equipment and tools. Implementation of these activities will be planned by the delegated offices of the MoA and devolved to local service providers. Technical knowledge will be drawn from the CNRADA as well as research results obtained under such projects as WAAPP. This knowledge will include formalization of indigenous knowledge and practices for agricultural adaptation and resilience building.

25. **Sub-Component 1.2: Augmentation and diversification of the local income base (US$4.2 million).** SC 1.2 will finance an Income generating Matching Grant (IMG) program to promote IGAs that also enhance climate resilience, including: (i) innovation and diversification of cropping activities; (ii) simple primary processing and marketing of traditional products, giving priority to those that are adapted to climate change; and (iii) provision and sale of basic agricultural services such as pest and disease management, rental of equipment, sale of inputs, transportation, or storage. The IMG program will support different forms of economic organizations of producers. To that effect, the small-scale farmers will be encouraged to organize into entities such as producer groups, cooperatives, or Common Interest Investment Groups (CIGs). Selection criteria for the IMG program will include incorporation of climate smart practices and technologies into proposed investment plans. The above will be achieved through the following twin activities:

a) *Outreach, awareness, and Business Plan (BP) development (approx. 30 percent of the funds)*. This activity aims to support individual and collective IGA sub-project (SP) holders, through the project cycle from identification to implementation stage. SC 1.2 will finance the mobilization of a service provider who will be responsible for: (i) an initial rapid analytical assessment of experiences in promoting IGAs in Mauritania; (ii) an awareness campaign to reach out to potential sub-project proponents; (iii) technical assistance to potential beneficiaries to prepare their sub-project grant proposals including the analysis of the profitability of their IGAs (through tools such as the

[13] *Physical rehabilitation and construction work implemented by the communities may include: (i) soil and water conservation infrastructure such as terraces, water harvesting trenches, etc.; (ii) assisted natural regeneration, vegetative gully reclamation; (iii) enclosures and establishment of grazing corridors, including wind barriers; and (iv) development of water resource retention (shallows, ponds, dikes) and user systems in flood-recession areas.*

RuralInvest toolkit)[14]; and (iv) assistance to grantees in implementing their sub-projects including delivering the required organization support and capacity development. In all cases, criteria for award of grants will include climate consideration and climate risk and management of IGAs. The subcomponent will cover operating costs of the grant allocation decision and oversight committees established at decentralized level; and

b) *Provision of grants (approx.* 70 percent of the funds). SC 1.2 will provide grants to co-finance collective IGA sub-projects (SPs), or to provide matching funds to existing local initiatives, with a focus on activities that enhance climate resilience capacity including: (i) local value addition; (ii) employment generation; and (ii) climate-smart and climate-resilient practices and technologies. SPs will cover the cost of inputs and basic equipment. The grants will finance eligible sub-project investments to the tune of 80 percent under regular circumstances, and up to 100 percent where SPs generate auxiliary collective benefits. Eligibility criteria will include initiatives that address local climate vulnerabilities and strengthened resilience of beneficiaries, among others. Eligibility will also consider SPs that may incorporate potential investments in areas such as soil fertility and conservation measures, and afforestation/reforestation efforts. The grant amount for a SP is not capped as such. However, given that SPs are collective, it is expected that the amount of the SP will not exceed US$500 per beneficiary or an average financial amount of about US$10,000 per SP. The matching grant mechanism will rely on an effective consultation of targeted SP holders to ascertain their preferences, a clear and simple grant application mechanism, a transparent selection process, and a training process to develop their skills to start IGAs and micro-enterprises.

26. SC 1.2 will have a special focus on women's IGAs or micro enterprises to reduce the gender gap in women's participation in productive activities. The Project Implementation Manual (PIM) will include modalities to enhance participation of female applicants and provide tailored gender specific training. In this regard, PADISAM will build on the experience of the PRAPS I and II projects regarding the delivery of matching grants.

27. **Sub-Component 1.3 - Institutional support to MoA's services and affiliated entities (US$3.5 million).** Project execution will involve novel incremental activities, and for which MoA's services and affiliated entities have limited operational capabilities. In this context therefore, support will be provided to strengthen the MoA services and entities.

28. *MoA's services:* The project will strengthen MoA's capacity: (i) to plan and implement climate-smart landscape interventions adapted to the rainfed context under Component 1, including to prepare and respond to shocks and crises and sequester carbon in the landscape; and (ii) to lay the groundwork for ZOCA development in collaboration with MoE. Such groundwork includes, among others, supporting communities to get organized in cooperatives, or other forms of entrepreneurship to have better access to funding and facilitate land governance and titling. The project will finance: (i) analytical and policy planning assistance in rainfed areas; and institutional strengthening to prepare and roll out a training plan on landscape approaches, for central and decentralized services, as well as for field-based services

[14] *RuralInvest is a multilingual methodology and toolkit for preparing sustainable agricultural and rural investment projects and business plans. It is participatory, interactive and bottom-up and designed to be used with communities, entrepreneurs, government field technicians, project staff and local financing institutions. It automates many financial calculations needed to analyze project proposals. It considers all elements, allows for comparison of alternatives, and can also be used to monitor and evaluate proposals. The main outputs generated by RuralInvest include Annual cash flow, Costs, income and net income, Number of direct and indirect beneficiaries. Additionally, IRR and NPV can be calculated as needed.*

providers - this training will include modules to raise awareness of climate risks and impact, and identify integrated landscape approaches to support climate smart decision making for both adaptation and mitigation outcomes; and (ii) technical assistance for the design and implementation of the public infrastructure investments in the pilot ZOCA block(s). In addition, technical assistance to public infrastructure will prioritize investments that will contribute to energy efficiency.

29. *National Center for Agricultural Research and Development*: Financing under this sub-component will support the multiplication and provision of climate resilient crop varieties/improved seeds for rainfed crops through the CNRADA. The sub-component will finance: (i) studies and technical work for the review of the seed legislative and regulatory framework, including identifying entry points for climate-smart seed policies and seed system development strategies; (ii) technical supervision of the process of multiplication and dissemination of climate resilient/improved seeds; and (iii) the investment and operating costs of local seed multiplication farms, including the supply of inputs and basic equipment. As applicable, climate resilient design standards and energy efficiency considerations will be considered for proposed investments on local seed multiplications farms and related inputs and equipment. SC 3.1 will also finance research intended to promote innovation in fields such as hydroponics and organic fertilizer production which will contribute to climate mitigation outcomes.

COMPONENT 2 – INCLUSIVE COMMERCIAL AGRICULTURE (US$27.5 MILLION EQUIVALENT)

30. **Component 2 will support the development of commercially oriented intensive agriculture production systems by large agribusiness investors and SMAEs under PPPs established between the Government, the investors, and the local communities.** The Commercial orientation of agri-entrepreneurs will lead to increased income, a better ability to preserve assets in the face of shocks, and higher capacity to accumulate assets and smoothen consumption during shocks, all of which will enhance the resilience of producers and actors along the agricultural value chain. Component 2 will support the development of two pilot ZOCAs on suitable potentially irrigable land sites[15].

31. **The availability of land for the pilot ZOCA block(s) will be negotiated with local communities.** Negotiations with communities and implementation of the PPP process underlying ZOCA deployment will be predicated on a go/ no-go sequence of steps (see Box 2 and Annex 2 for details) involving all interested parties. This component will have three subcomponents as described below.

32. **Sub-Component 2.1: Planning and implementation of ZOCA public investments (US$20.6 million).** SC 2.1 will lay the foundation for the development of intensive irrigated production systems on the selected ZOCA site(s) to protect against climate-induced water scarcity and enhance market access and commercialization. The project will (i) support the planning of deployment of the ZOCA program, including the selection of ZOCA investors; (ii) frame contractual arrangements between investors and communities and provide sufficient assurance to communities in negotiations with the potential investor to protect their interests; (iii) support training for community members on the land rights documentation procedures and the entire ZOCA process, with an emphasis on their rights and responsibilities, ideally before or as part of the ZOCA decision-making process; and (iv) finance the design and construction of the ZOCA climate resilient public productive infrastructure to give sufficient

[15] *Project support to the ZOCA perimeter(s) is conceived as a pilot to later inform the rollout of the entire ZOCA program at national level to attract investors interested in developing large-scale land-based agro-industrial operations (blocks of 300-400 ha) and allow SMAEs (5-20 ha/ average 10 ha) to develop intensive commercial agriculture alongside the large producers.*

incentives for private investors and small/medium agri-entrepreneurs alike to join the ZOCA program. The contractual arrangements will be prepared early on at project start with support of the TA that will be recruited by the project to assist in PPP deployment. MoE will oversee the implementation of SC 2.1, in close coordination with MoA for technical support, and with support of dedicated TA to be recruited.

Box 2: Go/ no-go decision-making process for ZOCA implementation

ZOCA implementation will be guided by the CFS-RAI which advocates for responsible investment to meet challenges posed by population growth, changing consumer behavior and climate change, and to successfully overcome hunger and malnutrition, among others, as well as the VGGT principles, and UNIDROIT/IFAD legal guidelines*, with extended participation of local communities. SC 2.1 will provide technical assistance in support of the required steps of the corresponding go/ no-go decision-making process, bearing in mind that a high degree of both rigor and flexibility will need to characterize ZOCA deployment, so that activities can easily be moved, altered, or brought to a stop as needed. This will be achieved through sequencing of field operations based on a set of pre-requisites and comprehensive feasibility studies with built-in decision points: (i) **step 1**: site assessment from physical, environmental and socio-economic viewpoints; (ii) **steps 2 and 3:** preparation of a land allocation plan based on close consultation with local communities; (iii) **steps 4 and 5:** preparation of the detailed feasibility studies (including climate considerations and environmental impact, relocation and compensation plans for affected communities) and the cost-benefit analysis; (iv) **steps 6 and 7:** negotiation of the tripartite PPPs between the State, the communities and the investors, based on land use agreements (*ententes foncières*), detailed mapping of land rights and issuance of land documents; (v) **step 8:** construction of the basic infrastructure on the ZOCA blocks with a focus on irrigation and other public infrastructure facilities to attract and facilitate intervention by large investors; and (vi) **step 9:** review of sub-projects and issuance of matching grants to SMAEs under the Small Grant Program.

** UNIDROIT (International Institute for the Unification of Private Law) / IFAD: Legal Guide on Agricultural Land Investment Contracts (ALIC) presented at the Nov. 2021 Conference on Land Policy in Africa.*

33. *Funding of the public infrastructure of the ZOCA sites*. The items to be financed will include *on-site climate resilient* infrastructure, *inter alia*[16]: (i) construction or upgrade of basic primary and secondary water-and energy efficient irrigation facilities (canals, irrigation hydrants, water retention works, etc.) to address climate-induced water scarcity, including the cost of critical equipment such as primary water pumping/ delivery equipment for on-farm production as required for total or partial irrigation control; and (ii) connection to the main power and potable water grid, and/or equipment for the provision of power and drinking water. Energy efficiency and climate resilient design standards will be applied to proposed infrastructure to enhance climate mitigation and adaptation outcomes, respectively. SC 2.1 will also finance the construction of critical offsite infrastructure linking the ZOCA perimeter(s) to outside facilities, such as 'last mile' roads to the main highways and markets as well as utility connections. These will follow climate-resilient design standards and will be paved to be weather resistant to withstand extreme weather. SC 2.1 will include financing for: (i) the initial preliminary studies required to assess the suitability of the potential ZOCA sites; (ii) the detailed technical studies for the selected ZOCA site(s); and (iii) the supervision of construction works and oversight of procurement of equipment. As part of the PPPs, the large agri-investors are expected to self-finance the required tertiary infrastructure, in particular irrigation facilities (including their design and work supervision) on the land tracts made available by local communities. To ensure sustainability and preservation of natural resources, considering the potential impacts of climate change, every effort will be made to climate-proof and adapt the public infrastructures to be financed against the negative effects of flooding and drought, and other adverse climate impacts, and external investors will be required to adopt climate sensitive

[16] *The detailed list of infrastructure to be financed will be the object of tripartite negotiations involving the Government, local communities, and external investors under the PPP agreements.*

technologies. In addition, energy efficient irrigation and buildings will be promoted to reduce GHG emissions.

34. **Sub-Component 2.2: Support to small and medium agri-entrepreneurs (US$1.9 million).** SC 2.2 will support a Small Grant Program (SGP) in the form of matching grants for eligible agricultural production and service activities to be developed within the ZOCA blocks.

35. Eligible beneficiaries of the SGP will be SMAEs established or intending on establishing themselves in the ZOCA perimeter for the purpose of developing climate-smart farming enterprises with the possibility of doing so in association with the larger farmers (Box 3).

36. Other eligible beneficiaries will be SMAEs developing agricultural services that will enhance farmer's climate resilience and complementary or ancillary to production in the ZOCA blocks, such as primary processing/conditioning, storing/ transport, and/or offtake/marketing of agriculture products, as well as provision of basic agricultural support services (disease management services, sale of inputs, transportation or storage, and related activities). These agri-entrepreneurs are expected to have experience or be willing to adopt CSA production or climate-smart agri-business value chain activities and have sufficient access to funds to contribute their share of the cost of their sub-project initiatives. Preferential treatment will be given to women and youth (particularly young graduates) who intend on developing CSA production activities or agriculture business services based on the knowledge and education they have received. Potential SMAE candidates will receive support to prepare their sub-project initiatives, and advisory assistance and training by MoA services to implement these initiatives thereafter.

Box 3: Partnerships between SMAEs and large-scale agri-investors in the ZOCA perimeters

The ZOCA core perimeter and broader catchment area will include areas assigned to SMAEs under the negotiated Land Use Framework. To the extent that beneficiaries are interested, there will be an opportunity for SMAEs and the larger farmers to enter partnership arrangements. The SGP will provide support to establish these partnerships. The partnership scheme is meant to be a win-win for both types of farms: (i) the larger farms will be able to secure additional and steady supply of production, leading to economies of scale and greater competitiveness; and (ii) the small/medium farms will take advantage of a secured market for their production at set prices, as well as assistance in the provision of inputs and support for the adoption of new technologies. The long-term goal of the scheme is to establish the foundation for contractual arrangements between the two groups of farms, with the setting of prices and quantities for production jointly, including the requirements to be adhered to in terms of product quality and timing of delivery. The partnership scheme will not be imposed on large or smaller farms. It will be demand driven. The corresponding contractual arrangements will be specified as the business relationships develop organically on a voluntary basis, case by case.

37. The grants provided by the project will finance a package of investments, with a focus on innovative and climate-smart investments (small production equipment, infrastructure - notably energy efficient irrigation systems, etc.). The grants will amount up to 90/67 percent of eligible sub-project costs for a total amount not exceeding US$45,000/US$100,000 for individuals/SMAEs. The specifics of the SGP investments, especially as regards to irrigation infrastructure, will be determined based on climate-informed feasibility studies and business plans of the individual ZOCA sites. SC 2.2 will fund technical assistance to help manage the SGP scheme across its implementation cycle, covering the sensitization and awareness campaigns, assistance to the preparation of the sub-project initiatives including development of the underlying climate-informed business plans, and monitoring and evaluation of sub-project implementation. It will also fund MoA's climate and agronomic advisory services to provide

climate smart agriculture extension support to participating farmers/ entrepreneurs, including the delivery of training activities with content and approach tailored to their needs. Among the selection criteria for SGP investments will include incorporation of climate smart practices and technologies. The selection and eligibility criteria for the SGP beneficiaries, as well as the specific procedures for matching grant management/ disbursement and subproject monitoring, will be detailed in the PIM.

38. **Sub-Component 2.3: Institutional support to MoE and other ZOCA implementing entities (US$4.9 million).** The objective under this sub-component is to establish a legal and institutional framework conducive to facilitating the effective implementation and management of the ZOCA program and bringing its impact to scale. In this context, the project will provide support towards establishing an efficient governance framework with a focus on the legal procedures, institutional arrangements and operational factors needed to attract private investors to the ZOCA program. This framework will act as an organizing umbrella under which implementation of the ZOCA program will be promoted, coordinated, supported, and monitored, as part of Mauritania's broader private sector development strategy[17]. SC 2.3 will finance the following set of activities:

39. ***Support to the MoE and other ZOCA implementing entities.*** SC2.3 will provide targeted TA and capacity building support to MoE, and other implementing entities to plan and oversee the general deployment of the ZOCA program, provide the required training on climate awareness, climate risk management, and implementation modalities and assist the implementation of the selected pilot ZOCA block(s). This activity will support the MoE's General Directorate for PPPs, as well as the newly created Agency for Promotion of Investments in Mauritania (APIM). Among others, the TA will focus on: (i) assessing the operational modalities for overall planning, promotion and rolling out of the ZOCA program - including reviewing the legal and institutional framework for the ZOCA program and how it aligns with private sector promotion in Mauritania; (ii) defining the steps and preparing template PPPs to be used in the ZOCA contractual arrangements; (iii) providing training regarding the modalities for responsible investment (CFS RAI and VGGT) and the go/ no-go decision-making process to be followed for the ZOCA site and investor selection and legal aspects of PPPs using the International Institute for the Unification of Private Law and International Fund for Agriculture Development (UNIDROIT/ IFAD) guidelines; and (iv) building capacity in enterprise management to producer groups, SMEs and agri-business associations which will be party to the contractual arrangements under the SGP, including capacity building and supporting the development climate smart business plans.

40. Given the importance and sensitivity of land tenure issues, specific support will be provided to the newly created cross ministerial committee (National Agricultural Land Resources Committee - Box 4) the key role of which is to facilitate land agreements between the different ZOCA stakeholders in compliance with the current legislation. In addition, SC 2.3 will provide targeted operational support to the PPP General Directorate in planning, promoting, rolling out and monitoring implementation of the pilot ZOCA perimeter(s). This activity will include supporting the go/ no-go decision-making process for the final selection of the sites, and the negotiation of the PPP agreements with all interested parties. APIM will be associated with all the interested parties as called by its mandate; it will benefit from direct technical support through participating in contracts and negotiating with potential investors. Finally, in supporting the ZOCA planning and promotion process, the project will coordinate with other

[17] *See Code des Investissements: http://www.investinmauritania.gov.mr/IMG/pdf/NV_code_Fr.pdf, 31 July 2012*

development partners, notably International Finance Corporation IFC), which are already conducting business development work such as identification, development, and promotion of investment opportunities in agribusiness. The focus of this collaboration will be on identifying concrete investment opportunities and sharing of experience regarding firms that could be potential tenants, suppliers, or buyers for each ZOCA block.

41. **Support to local communities, Ministry of Agriculture, Ministry of Finance and Ministry of Interior for land related matters.** The project will devote particular attention to land tenure issues in supporting development of the ZOCA sites. SC 2.3 will assist the deconcentrated services of the Ministry of Interior to deal with land tenure arrangements in support of the local communities as the ZOCA program is rolled out. It will build the capacity of the Ministry of Finance to steer and oversee the land allocation process. SC 2.3 will assist the territorial services of the Mauritanian administration and the local communities to (i) undertake the land rights inventories of the ZOCA blocks, including making a tally of all formal and customary rights; (ii) on that basis, prepare a land use framework for the ZOCA perimeters to determine cropping patterns and other land use; and (iii) identify the proportion of their own land which the communities choose to make available to private commercial agriculture producers, as part of ZOCA development. The project will further support the attendant update of the mapping of land rights in the ZOCA blocks and preparation of the cadastral plan showing the allocation of land between investors and communities. To foster climate change adaptation as part of land administration, the project will develop geospatial databases with climate risk data, demarcate zones and areas vulnerable to climate change, and integrate climate resilience and land use planning. The proposed ZOCA approach will develop resilience measures to mitigate risks linked to climate change and its impacts. The expected investments on technologies and agroecological capacity building will enhance agricultural productivity while safeguarding environment and minimizing negative social impacts.

> **Box 4: National Agricultural Land Resources Committee**
>
> GoM has recently created a high-level committee to 'support the optimal mobilization of Mauritania's Land Patrimony' by joint decree of MoE, MoA and the Ministry of Interior and Decentralization (Jan. 17, 2022). The Committee's central mission is to facilitate land agreements between the different ZOCA stakeholders in conformity with the current legislation. It will play a central role in the ZOCA land negotiations. The creation of the Committee testifies of the GoM's intent to adhering to a responsible investment approach predicated on the respect of existing land tenure arrangements.

42. SC 2.3 will provide specialized technical support for the above process to both assist local communities as the ZOCA program is rolled out, and, concomitantly, build the capacity of deconcentrated government services, including the territorial administration, to facilitate the process. The National Land Resources Committee will receive technical support under this activity. It is expected that the capacity strengthening of these stakeholders would also be focused on the integration of climate risk management into land resources or ZOCA planning and development, as well as also making sure that those benefitting from the grant mechanisms incorporate climate related activities into their business plans.

COMPONENT 3 - PROJECT MANAGEMENT, MONITORING AND EVALUATION (US$5.0 MILLION EQUIVALENT)

43. This component will support the operations of the Project Management Unit (PMU) at central and regional (*wilaya*) levels. The component will finance (i) the equipping of the national and regional PMUs, including vehicles, office furniture and IT equipment, field tools, etc., and attendant running costs such as staff salaries and subsistence allowances, consultant fees, internal and external audits, etc., as well as all

expenditures related to utilities; (ii) staff training (with focus on the Environmental and Social Management Framework – ESMF, MIS and Kobotool Box, financial management and procurement, as well as Grievance Management and Gender-Based Violence prevention measures). It will also finance the costs of project M&E activities, as well as the project sensitization and communication campaigns.

COMPONENT 4 - CONTINGENCY EMERGENCY RESPONSE COMPONENT (US$0.00).

44. The component is designed to provide swift response in the event of an eligible crisis or emergency, defined as 'an event that has caused, or is likely to imminently cause, a major adverse economic and/or social impact associated with natural or man-made crises or disasters. No allocation is made for this activity which will be funded as required from other components as the need arises through reallocation of proceeds.

PROJECT COST AND FINANCING

45. The project will be financed through an Investment Project Financing (IPF) envelope of US$50 million. Complementary financing for Component 2 is expected to be provided by large investors and SMAEs. Table 1 below summarizes project costs per component to be covered by IDA financing.

Table 1: IDA financing by component (US$ million)

Components	Amount (US$	Percentage of total
Component 1: Community-driven territorial development and preservation	**17.5**	**35.0**
S.C. 1.1: Sub-watershed level landscape planning and restoration	9.8	19.6
S.C. 1.2: Augmenting and diversification of the local income base	4.2	8.4
S.C. 1.3: Institutional support to MoA's services and affiliated entities	3.5	7.0
Component 2: Inclusive commercial agriculture	**27.5**	**55.0**
S.C. 2.1: Planning and implementation of ZOCA public investments	20.6	41.2
S.C. 2.2: Support to small and medium agri-entrepreneurs	1.9	3.8
S.C. 2.3: Institutional support to MoE and other ZOCA implementing entities	4.9	9.8
Component 3: Project management, monitoring and evaluation	**5.0**	**10.0**
Component 4: Contingency Emergency Response Component	**0.0**	**0.0**
Total financing	**50.0**	**100.0**

1/ Co-financing by large investors is estimated at US$ 16.7 million - 2/ Co-financing by SMAEs is estimated at US$ 1.3 million

C. Project Beneficiaries

46. Geographic coverage. The project will intervene in the following areas[18] (i) SWSs in three regions (*wilayas*) of the country under Component 1 (Brakna, Gorgol and Assaba). These *wilayas* were primarily selected for their high level of poverty and proximity to each other which will facilitate coordination of project interventions. The project will focus on 32 communes selected by MoA using a multi-criteria approach factoring vulnerability, poverty, agriculture development potential and presence of other planned interventions. These 32 communes are home to approximately 360,000 people and spread over six departments (*moughataas*). Under Component 2, the project will intervene in three regions (Trarza, Brakna and Gorgol) and primarily focus on one (or two) pilot ZOCA perimeter(s), to be selected from six ZOCA perimeters that have been pre-identified during preparation i.e.: Bababe, Thienel-Boghé and Dar El Barka in the Brakna region, and Aftout Nord, Aftout Sud and Tekane in the

[18] *Mauritania is administratively divided into 12 wilayas (provinces), 44 moughataas (departments) and 216 communes.*

Trarza region[19]. The project coverage is expected to be extended during the course of the project implementation to other *wilayas* located further to the eastern parts of the country, e.g., Hodh Ech Charghi, Hodh El Gharbi and Guidimakha. These regions have similar agricultural potential and are impacted by the same constraints hampering the development of this potential.

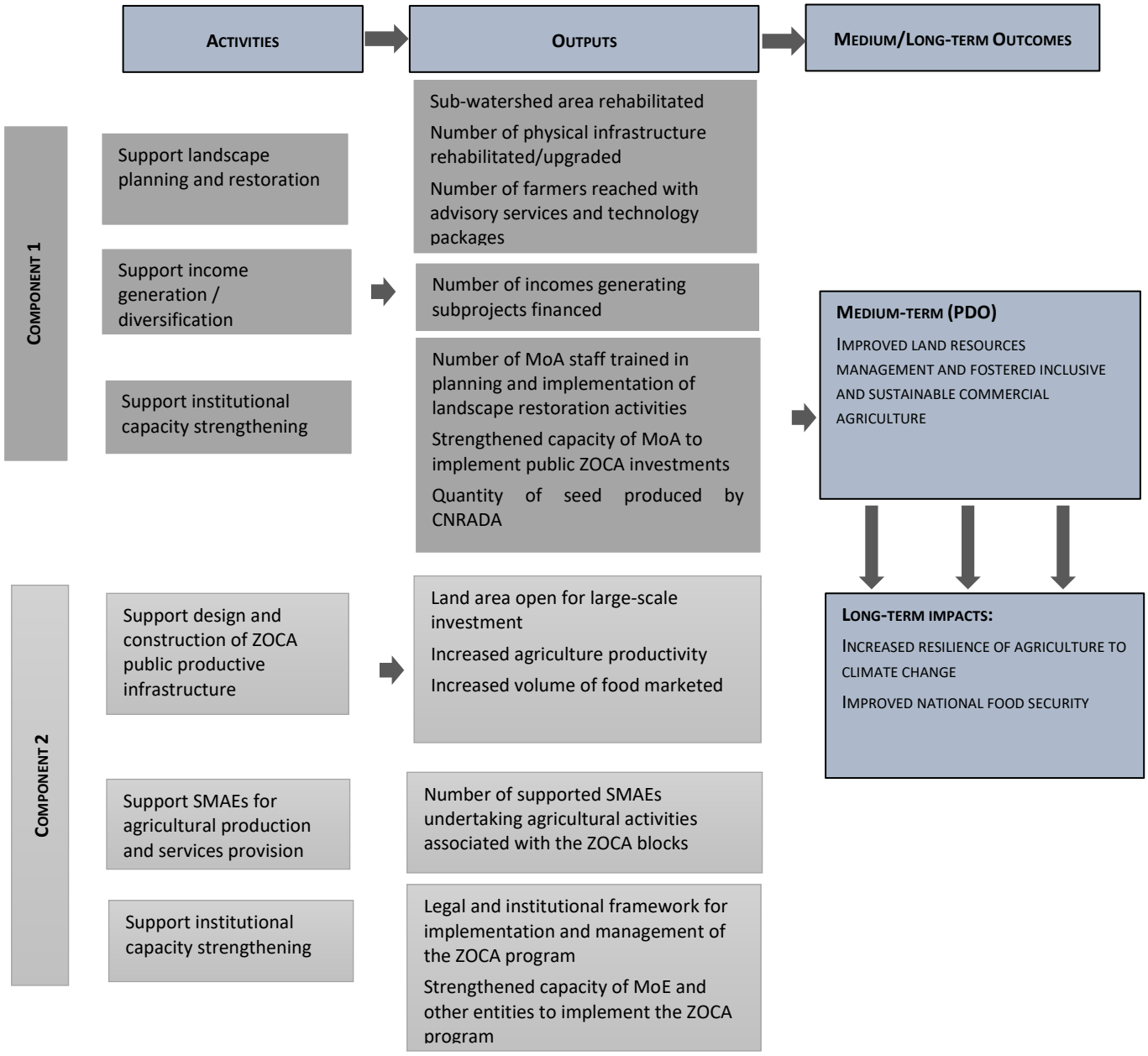
47. Beneficiaries. The project is expected to reach the following beneficiaries: (i) *under Component 1*: beneficiaries will be smallholders practicing farming, herding and non-farming activities; and (ii) *under Component 2*: beneficiaries will be the private firms which will invest in the ZOCA perimeters, and the SMAEs associated with these perimeters and benefiting from both the SGP and investor support. Other beneficiaries will be service providers and off-takers in the targeted value chains, as well as local communities benefiting from the ZOCA spillovers. Under both components, the project will establish mechanisms to target disadvantaged populations (notably women and youth, including unemployed graduates). The benefits of capacity building interventions will accrue to the institutions targeted at central, regional and department levels.

D. Results Chain

48. The project's Theory of Change (ToC) is presented below. The TOC is contingent on the following critical assumptions: (i) the socio-political situation in the country is stable; (ii) the communities are willing to negotiate and cede land for ZOCAs; (iii) the farmers are willing and able to adopt best practices and technologies on sustainable landscape management and enhanced agriculture and livestock productivity; in this regard, implementers need to have sufficient outreach and extension capacity to support farmers, particularly female and youth farmers, to adopt best practices and technologies; and (iv) investors find the enabling environment sufficiently attractive (e.g., secured access to land for SMAEs and large investors in the ZOCAs) and the risks manageable to finance the large farms under the ZOCA program.

[19] *The cost of ZOCA deployment to be taken up under the project is based on the two pre-identified sites of Bababe and Thienel-Boghé as characteristic of the average hypothetical situation expected to prevail across the six pre-identified sites.*

Figure 1: Project Theory of Change (Results Chain)



E. Rationale for World Bank Involvement and Role of Partners

49. The World Bank's added value in the proposed project is twofold: (i) promoting knowledge sharing; (ii) facilitating the multi-sector engagement required to pursue the ZOCA objectives of inclusive agriculture commercialization; and (iii) ensuring a legal framework for the voluntary transfer of land ownership to investors accompanied by fair compensation to communities with a guarantee of equity and social peace. The Bank has unrivalled experience and knowledge in supporting landscape restoration and management and related efforts to speed the adoption of improved climate-smart

agricultural technologies and diversification of farmers' incomes. The World Bank also has vast knowledge in facilitating and promoting largescale private investment in the agriculture sector that is attuned to local needs, and operates responsibly to maximize benefits and minimize risks, in line with international practices and standards. In addition, the World Bank will use its convening power to ensure that land management issues are addressed in a fair and equitable manner while helping the implementation of such a transformational project. The land issues and other important aspects of the project will be dealt with in accordance with the current country's legal framework for land management and public-private partnership agreements. Already, issues related to land ownership of the selected pilot sites for the project (Bababe and Thienel), the land agreement between the various landowners and rights holders and the mode of transfer of land to private investors were addressed in a participatory manner during project preparation. The World Bank's knowledge and experience has therefore been brought to bear on the project design and this support is expected to continue throughout project implementation. Finally, the World Bank has experience in facilitating inter-institutional coordination among government departments and agencies, as well as other stakeholders towards a common goal. Such multisector engagement is key to the success of the ZOCA program.

50. The project complements other WBG–financed operations across the sector, especially at production level, including (see para. 13). The project will liaise closely with IFC. IFC expertise is vital for promoting the wider development of commercial agriculture in Mauritania, especially for building capacity of APIM in investments preparation and promotion, educating bankers on the nature of business in agriculture and the processing industry, and developing new financial instruments. The project also complements projects by other international development partners, such as (i) the Islamic Development Bank; and (ii) development agencies and NGOs active in agriculture amongst others, the European Union and the French Agency for Development (AFD).

F. Lessons Learned and Reflected in the Project Design

51. The project builds on recent analytical work and interventions regarding (i) development of rainfed areas, and (ii) PPPs models between large scale farms and smallholders for intensive output. Regarding interventions in rainfed areas, the project reflects the conclusions and recommendations of a World Bank report "*Confronting Drought in Africa's Drylands: Opportunities for Enhancing Resilience*" (2016)[20]. The proposed landscape restoration, water catchment and productivity enhancement interventions are directly aligned with the recommendations of the report and seek to advance measures to reduce the vulnerability and enhance the resilience of the targeted populations. Regarding ZOCA interventions under the PPPs supported by Component 2, the proposed project borrows substantially from the design of Bank-financed operation "Senegal Sustainable Agri-Business Development Project (P124018)"; this project covered an area north bank of the Senegal river where agro-climatic conditions are like those of the ZOCA sites to be financed. Regarding land tenure specifically the project borrows extensively from the *Review of the Land Situation in Mauritania*[21].

52. The project reflects the lessons learned from several projects previously implemented in Mauritania, notably the need to undertake extensive consultation and meaningful participation by beneficiary communities in the design and implementation of government programs. This also includes incorporating cultural and local knowledge in programming to enhance ownership, sustainability, and inclusion.

[20] *ISBN (paper): 978-1-4648-0817-3*
[21] *Mauritanie: Revue du Secteur Foncier, World Bank internal report, edited by André Teyssier and Pascal Thinon, July 2018.*

53. The selection of sub-projects receiving grants is based on the conclusions and recommendations of World Bank thematic studies.[22] The selection of SPs under the IMG and SGP is predicated on a reinforced implementation mechanism put in place, at both local and central levels, through the mobilization of specialized operators for the administration of funds, and for the delivery of technical support to sub-project holders. Regarding targeting beneficiaries, recommendations from recent work on granting subsidies to the poor for asset acquisition have been taken into consideration, in two ways: (i) decision to release the small grants will be based on strong eligibility and selection criteria to avoid elite capture; and (ii) grants will be made on a matching basis with a contribution from recipient, either in cash or in kind, to ensure ownership[23].

54. The project design is guided by the completion report of the FY14-16 Country Partnership Strategy (CPS - Report No. 75030-MR). The report noted the weak capacity in much of GoM's administration and argued for the inclusion of strong capacity building support in individual operations as well as long-term reform and modernization. The project will deal with institutional building, putting strong emphasis on developing adequate capacities – particularly at the deconcentrated level in areas such as agricultural advisory support or land tenure administration, by funding initial needs assessments and providing technical assistance as needed.

III. IMPLEMENTATION ARRANGEMENTS

A. Institutional and Implementation Arrangements

55. The MoE will have overall institutional project oversight whilst the MoA will be accountable for project day-to-day execution. A Project Steering Committee (PSC), chaired by a high-level staff from the MoE, will provide the overall strategic guidance to project implementation. The PSC will review and approve the Annual Work Plan and Budget (AWPB), as well as the official progress reports, and make recommendations for adjustment. The PSC will have a membership composed of the ministries of Agriculture (MoA), Livestock (MoEL), Finance (MoF), Interior and Decentralization (MoID), Environment and Sustainable Development (MoESD), Oil, Mining and Energy (MOME), Hydraulics and Sanitation (MHS), as well as the federations of agricultural producers/ herders.

56. A National PMU(N-PMU) will be established at MoA to take charge of the day-to-day project management. The N-PMU will be established at the cabinet of MoA[24]. The N-PMU will have responsibility for (i) fiduciary management, including the management of the project accounts and procurement activities; (ii) environmental and social safeguards compliance; (iii) project Monitoring and Evaluation (M&E) activities; and (iv) technical backstopping of implementation. It will act as the secretariat to the PSC. The N-PMU will have two technical sections, responsible for implementation of Components 1 and 2, and a separate one responsible for Component 3. Component 1 staff will report technically to the MoA while Component 2 staff will report technically to the MoE (PPP directorate) which will oversee the ZOCA development activities. The required technical assistance will be provided

[22] *How Can Matching Grants in Agriculture Facilitate Access to Finance? Lessons Learned from World Bank Group's Experience. 2019.*
[23] *World Bank, 2011, Joint Discussion Paper. The World Bank, BMZ, FAO, GIZ, IFAD and UNCDF, "Subsidies as an Instrument in Agriculture Finance: A Review". World Bank, Washington, DC.*
[24] *For the purposes of managing the PPA resources and activities, project management has been entrusted to the Bank-financed PARIIS' project PMU under PARIIS project*

to strengthen MoE's technical services, including its PPP Directorate and the APIM to enable them to provide the specialized support required to implement the ZOCA program. The Land Resources Committee will support the project in the implementation of land-related activities as part of the deployment of ZOCAs.

57. At regional and community level, project strategic guidance will be vested with the Regional Development Committees (CRDs) and Commune Coordination Committees (CCCs). The CRDs are chaired by the regional governors (*Walis*). At the community level, the CCCs are chaired by the head of the department or prefect (*Hakem*). The key stakeholders will be tasked with ensuring *inter alia* that project planned activities are well articulated with the priorities as exhibited in the regional and commune's Local Development Plans (PDLs). For details on institutional arrangements (Annex 1).

B. Results Monitoring and Evaluation Arrangements

58. **M&E responsibilities.** The PMU will develop the project M&E procedures as part of the overall PIM. The specific M&E manual will: (i) identify M&E roles and responsibilities; (ii) provide common references for results framework indicators; (iii) define the characteristics of the project monitoring and tools; (iii) identify indicators to track progress (results chain); (iv) define the purpose and type of specialized evaluations and studies; (v) monitor complaints; (vi) collect best practices/ case stories; and (vii) provide a format for the project progress reports and the project completion report. The PMU has the overall responsibility for producing progress reports every semester, as well as for the MTR and the end of project final evaluation.

59. **Results Framework**. A rapid assessment was conducted to establish preliminary baseline values as well as project targets. A comprehensive baseline survey (household survey) is planned for the first year of the project which will be followed by a midterm evaluation in third year and a final evaluation in the fifth year. The baseline survey, mid-term impact evaluation, and final impact evaluation will be contracted to a consulting firm.

60. **Project performance evaluation.** Achievements and progress toward results will be measured at project inception, MTR, and end-project stage, based on information reflected in indicators of the results framework and additional ad-hoc indicators as may be required under the results chain. The data will be collected based on specific protocols for data collection per indicator, household surveys and potential other independent qualitative evaluations (such as evaluation of IGAs, beneficiary satisfaction, gender evaluations, qualitative study of extension services and adoption of technologies, technical audit of infrastructures, etc.). The qualitative evaluations will be agreed by the PSC at the outset of each fiscal year as needed to document specialized issues related to project implementation. The PMU will be responsible for the contracting and oversight of the consulting firms/ institutes/ specialized NGOs conducting the various evaluations.

C. Sustainability

61. The sustainability of the key project outcomes is linked to: (i) the level of participation and appropriation by stakeholders, particularly local communities and direct beneficiaries in the entire planning and implementation process; (ii) the quality of works, goods and services provided to beneficiaries; (iii) the financial viability of large production farms under the ZOCA blocks, and income generating activities financed in the framework of the grant programs; and (iv) the functionality and efficacy of the various management committees set to manage and maintain project's achievements.

62. Regarding the landscape management and restoration investments, strategies deployed by the project to ensure sustainability include mobilizing local organizations able to facilitate highly participatory consultation processes and demand-driven approaches at community level. These local organizations will also be instrumental in delivering a strong capacity-building program, including strengthening of local groups, and assisting stakeholders in preparing social agreements covering the use and future maintenance of the physical infrastructures as well as other landscape features. The sustainability of the IGAs promoted by the project, will rely on: (i) the mobilization of qualified local service providers delivering high quality field-based assistance to project holders during preparation and implementation of the financed sub-projects; (ii) the systematic ex-ante use of tools such as RuralInvest to conduct rapid analysis demonstrating technical feasibility and financial viability at farm and household level, as well as public spillover co-benefits for communities; and (iii) decentralized decision making and public scrutiny upon grants allocation decisions to limit elite capture and misallocation.

63. With regards to ZOCA development, care will be taken to inventory all land rights and establish PPPs that can serve the Government's objectives, attract external investors, and benefit local populations. The SGP will enable smallholders to be associated to the large investors which will enhance the win-win situation benefitting both parties and pave the way for sustainability in terms of production and marketing of agriculture products.

64. Regarding service-delivery sustainability, the approach of the project is to invest in targeted capacity support of public institutions, specifically with MoA and MoE structures and affiliated entities, with particular emphasis on the services at deconcentrated level. In this area, the project TA elements will support the definition of capacity building needs, deliver trainings, and equip staff with tools and methodologies that can be used in the context of the landscape and value chain approaches, and sustained beyond the project's life span.

IV. PROJECT APPRAISAL SUMMARY

A. Technical, Economic and Financial Analysis

TECHNICAL APPRAISAL

65. **Rationale for technical design and approach**. The rainfed agriculture areas of Mauritania have historically received less policy attention and government support than the west-southern part of the country along the Senegal River, where much of the agricultural production occurs under irrigation. Near chronic food crises caused by increasingly erratic weather patterns affecting the entire Sahel region, pressures on the land from a growing population practicing mostly extractive agriculture, and a lack of basic services have led to many interventions but no clear policy that would lead to the sustainable development of the region. However, recent work by the World Bank in the region suggests that rainfed areas have significant, untapped agricultural potential that could be better harnessed if their populations were less vulnerable to recurrent crises, and agricultural support programs were more equitably distributed across irrigated and rainfed areas. The proposed project addresses the problem by providing support to improve agricultural household productivity as well as activities to reduce climate vulnerability. Similarly, the project recognizes that production growth and development can be achieved with funding, technologies and markets provided by large investors in potentially irrigable areas to the extent these investors can be attracted to develop available lands with the right incentives. The project also provides resources to help youth and women to take a more active role in

the local economy by sustainably utilizing local natural resources for small-scale activities and services.

66. Mauritania's agriculture challenges including vulnerability to shocks, require building resilience and productivity to effectively reduce food and nutrition insecurity, increase incomes and reduce poverty, and improve the welfare of people living across its territory. In response to the above challenges, the Government's strategy has two axes, i.e., participatory territorial development and restoration, and ZOCA deployment under PPPs. Under the participatory territorial development approach, small changes in the nature and mix of assets can improve the sustainability of the landscape in which people live, enhance the resilience of households, and improve their coping capacity to recover from shocks after they occur. Under the PPPs, agriculture productivity is set to be increased on large tracts of land, or through intensive production means, with the technical and management support of large investors bringing the technologies, the funds, and the market outlets. At the same time, investors would also benefit from cheap services and labor, as well as social peace. Under both strategic twin axes, coordinated and coherent agricultural and social protection policies and programs have the potential to help rural households and poor, small family farmers to build resilience and prevent the transmission of poverty across generations.

67. **Rationale for public sector provision.** Under Component 1, public funding in support of restoration and development of landscapes is clearly justified given the positive externalities it will generate in terms of ecosystem services provision (including carbon sequestration, reduced erosion, etc.), which are public goods. Under Component 2, the project addresses market failures related to temporary barriers to entry for large scale investors (including land governance, poor infrastructure) and those related to constrained access to finance.

ECONOMIC AND FINANCIAL ANALYSIS

68. An analysis was undertaken to assess the project's economic and financial impact. The project's quantifiable benefits will come from: (i) income generating activities (e.g., poultry, cattle, goats, vegetable production, and small agribusinesses); (ii) enhanced crop and livestock productivity induced by sustainable land management practices (e.g., sand dunes fixation, small earth dams, medium water infrastructure, tessa planting pits, and VG stripes), and by adoption of climate smart agricultural practices (e.g., compost production, conservation tillage, natural regeneration, and assisted regeneration); and (iii) additional agricultural output by medium and large investors in the ZOCA zones. Because of the diversity of the project landscape systems and the demand driven nature of the project's activities, the project's profitability analysis is based on illustrative farm budgets of the highly likely scenarios.

69. Adjustments were made to financial prices to derive economic prices, including deducting direct subsidies and taxes. For internationally traded goods (such as cereals), farm-gate import parity prices were calculated using international reference prices. For non-tradables, a standard conversion factor of 0.9 was applied to the local price component. The project's economic benefits are assessed over 15 years, using the opportunity cost of capital of 6 percent. More assumptions underlying the analysis are presented in Annex 3.

70. The analysis from the investment models shows that the investments in all IGA, CSA and SLM practices are financially viable, with financial rates of return (FIRR) ranging from 20 percent to 60 percent. The FIRR for the large farmers is estimated at 61 percent, whereas the FIRR for the SMAEs is estimated at 88 percent (reflecting the financial support extended to them by the project). The Economic Internal Rate of Return (EIRR) for the whole project is estimated at 27.5 percent, with a corresponding Net Present

Value (NPV) of US$45.6 million (Table 2). These results are robust, with the project remaining viable when costs go up, or revenues go down by as much as 30 percent.

Table 2: Financial and Economic Analysis for the Project

Description	EIRR	NPV (US$ million)
Basic scenario	27.5%	45.6
30% increase in costs	20.4%	33.5
30% decrease in prices	18.1%	19.7
30% increase in costs and 30% decrease in prices	12.5%	7.6

B. Greenhouse Gas Analysis

71. The FAO EX-ACT tool was used to assess the environmental benefits related to the activities that will reduce GHG emissions, sequester carbon, and mitigate the effects of climate change. The EX-ACT results show that the project is expected to sequester 960,124 t CO2e per year. When these co-benefits are integrated into the efficiency analysis, the EIRR increases to 30.0 percent with a corresponding NPV of US$66.6 million at the low Carbon price, and 34.0 percent with a corresponding NPV of US$78.4 million at the high Carbon price (Table 3).

Table 3: Estimate of Economic Returns with Environmental Benefits from GHG Reductions

Description	EIRR	NPV (@6%, US$ Millions)
Baseline	27.5%	45.6
Including CO2 benefits – at low Carbon price	30.0%	66.6
Including CO2 benefits – at high Carbon price	34.0%	78.4

C. Fiduciary

72. **Financial Management:** A financial management (FM) assessment was undertaken to evaluate the adequacy of the FM arrangements. Project overall FM activities will be executed by the National Project Management Unit (N-PMU) to be established under MoA's Secretary General Office (SGO). The assessment focused on the FM capacity in terms of planning, budgeting, accounting, internal controls, funds flow, financial reporting, and auditing arrangements in place to satisfy the World Bank's Policy and Directive – Investment Project Financing (IPF). This FM assessment was conducted in accordance with the FM Manual for World Bank Investment Project Financing Operations that became effective on March 1, 2010 and was re-issued on September 7, 2021. This FM assessment which was conducted to ensure that the N-PMU has the minimum requirements to manage project's financial management revealed the following weaknesses: (i) lack of relevant experiences in the management of projects and programs financed by the Bank; (ii) lack of qualified financial management staff; (iii) the lack of financial management tools: accounting software, and manuals of accounting procedures and financial management; and (iv) weak internal control.

73. To mitigate the financial management risks, the Project Coordination Unit of Sahel Irrigation Initiative Project in Mauritania (UCP-PARIIS-MR) will ensure the financial management aspects of the project until the full-establishment of the N-PMU. UCP-PARIIS-MR's FM Unit is familiar with the World Bank FM procedures and requirements and is currently responsible for the FM aspects of the Sahel Irrigation Initiative Support Project (P154482) related to Mauritania, an IDA-financed project. The current implementation arrangements in place for the ongoing PARIIS-MR financial management will be applied for this project. These are considered acceptable to IDA. The FM performance of the PARIIS-MR team

was rated Satisfactory following the last implementation support mission of April 2022. Finally, an adequate program of financial management responsibility transfer from UCP-PARIIS-MR to the N-PMU will be established. Prior to this financial responsibility transfer, the World Bank financial management team will conduct an assessment to determine whether the N-PMU has an adequate financial management systems and related capacity which satisfies the World Bank's Policy and Directive – Investment Project Financing (IPF).

74. To enable the N-PMU to take on the new project's financial management, the following actions will be implemented: (i) the recruitment of a qualified and experienced Administrative and Financial Management specialist (one month after project effectiveness) and Accountant dedicated to the project FM activities; (ii) the recruitment of a qualified and experienced internal auditor fully dedicated to the project internal auditing, based on quarterly internal audit report preparation using a risk-based approach; (iii) the development, prior to effectiveness, of a comprehensive Administrative, Accounting and Financial Manual of procedures and a separate sub-project grant manual which will describe the matching grants mechanism to be implemented under sub-components 1.2, and 2.2 in form and substance acceptable to the World Bank; (iv) the setup within three months after project effectiveness of a multi-project and multi-site financial and accounting management software in a manner satisfactory to the World Bank. Furthermore, the N-PMU will submit quarterly unaudited IFRs to the World Bank. Finally, the Project's annual accounts will be audited by an independent external auditor to be recruited within six months after effectiveness in compliance with Terms of Reference (ToRs) acceptable to the World Bank.

75. The overall FM residual risk rating for the project is assessed as Substantial since most of the mitigation measures included in the project design will not be completed by effectiveness. This FM residual risk is expected to become Moderate once the mitigation measures are implemented after the project effectiveness date. The above-mentioned FM arrangements including the risk mitigation measures (see FM Action Plan) are considered adequate to meet the World Bank's minimum FM requirements under World Bank Policy and Directive – IPF. Detailed FM arrangements are provided in Annex 1.

76. **Procurement:** Bank Procurement Regulations for Investment Project Financing (IPF). Procurement activities under the Project shall be carried out in accordance with the Bank procedures related to: (i) '*Procurement in IPF, Goods, Works, Non-Consulting, and Consulting Services*', dated July 1, 2016, revised in November 2017 and August 2018; (ii) '*Guidelines on Preventing and Combating Fraud and Corruption in Projects Financed by IBRD Loans and IDA Credits and Grants*', revised as of July 1, 2016; and (iii) the provisions stipulated in the Financing Agreement.

77. **Project Procurement Strategy Document (PPSD) and Procurement Plan (PP).** The Borrower prepared a PPSD which forms the basis for a PP for the first 18 months of the project implementation and provide the basis for the procurement selection methods. For each contract, the PP will define the appropriate procurement methods or consultant selection methods, the need for pre-qualification, estimated costs, prior review requirements, and time frame. The PP will be updated at least annually, or as required, to reflect the actual project implementation needs and capacity improvements. All procurement activities will be carried out in accordance with approved original or updated procurement plans. All PPs will be approved through STEP and published on the WB website according to the regulations.

78. **Procurement assessment.** The procurement assessment carried out in revealed that the MoA's staff have no relevant experience with World Bank procurement procedures. In accordance with the Client's

regulations, the procurement structures will be: (i) the *Commission de passation des Marchés de Département* (CMD, Departmental Procurement Commission) which will be in charge of the execution of procurement procedures whose estimate is equal to or more than MRU 1.5 million (approximately US$42,000); and (ii) the *Commission Interne des Marchés de l'Autorité Compétente* (CIMAC, Internal Procurement Commission) for procurement estimated at less than MRU 1.5 million.

79. Following the assessment and given that the procurement of the project will be done by the PMU, the overall risk of implementation in procurement is Substantial. The mitigation measures to be taken are: (i) Recruitment of a Procurement Specialist for the PMU to ensure quality control of procurement activities; (ii) Designation, by the MoA, of a Procurement Officer for the proposed project; (iii) Creation of an Internal Procurement Commission at the PMU; (iv) Training the team in charge of project procurement within the PMU and the Ministry Procurement Commission on the New Procurement Policy for Bank Investment projects; (v) Preparation of an administrative, financial procedure and procurement Manual for the project; and (vi) Preparation of a manual for the execution and monitoring of project activities.

D. Legal Operational Policies

	Triggered?
Projects on International Waterways OP 7.50	Yes
Projects in Disputed Areas OP 7.60	No

80. **The policy OP 7.50 "Projects on International Waterways" was triggered** because of the project intervention, in developing agricultural production (including livestock) in the three regions (wilayas) of Brakna, Gorgol, and Trarza, will use water for irrigation from the Senegal River. This international watercourse is managed by the "Organization pour la Mise en Valeur du fleuve Sénégal (OMVS)" which brings together the 4 riparian states of the river (Guinea, Mali, Senegal and Mauritania). In accordance with the OP 7.50 requirements, the Government of Mauritania has officially notified OMVS about the project expected type of activities and the volume of needs in terms of irrigation water. The OMVS has acknowledged the notification letter and recalled the provided procedures to be applied in such case.

E. Environmental and Social

81. **The project will be implemented under the World Bank's Environmental and Social Framework (ESF) and is rated Substantial for both Social and Environmental Risks.** Therefore, the overall Environmental and Social (E&S) Risk of the project is classified as Substantial. Main physical works are expected under component 1 and 2, regarding public infrastructure and services in the ZOCA areas, smallholders' investments in the form of matching grants to producers' organizations and individual agri-entrepreneurs involved in locally identified investment subprojects, tertiary irrigation, internal tracks, and storage, etc. The rating also takes into consideration the capacity of the implementing agency and other stakeholders involved to implement activities in line with ESF requirements.

82. **The relevant Environmental and Social Standards (ESS) are:** ESS1 (Assessment and Management of Environmental and Social Risks and Impacts; ESS2 (Labor and Working Conditions); ESS3 (Resource Efficiency and Pollution Prevention and Management); ESS4 (Community Health and Safety); ESS5 (Land Acquisition, Restrictions on Land Use and Involuntary Resettlement); ESS6 (Biodiversity Conservation

and Sustainable Management of Living Natural Resources); ESS8 (Cultural Heritage), and ESS10 (Stakeholder Engagement and Information Disclosure). ESS7 (Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities) and ESS9 (Financial intermediaries) are not relevant for the project.

83. Overall, the project is expected to have positive impacts given that planned activities aim to improve water use efficiency, promote climate-smart agricultural practices, enhance soil fertility, and increase productivity on existing agricultural lands. The project is also intended to generate positive social benefits by incorporating meaningful citizen engagement and feedback mechanisms (including a project-level GRM), foster social inclusion by addressing gender disparities, as well as actively supporting livelihoods for women, youth, and vulnerable groups (such as land less, pastoralists and smallholder farmers). However, the project is anticipated to have E&S risks and impacts mainly because of the nature and scale of the project activities under Components 1 (natural resource management activities, climate smart agriculture and livestock interventions, and support IGAs), and under Component 2 (i.e., public infrastructure and services in the ZOCA areas).

84. **Environmental Risks:** the main environmental risks and impacts identified in the Environmental and Social Management Framework (ESMF) are related to: (i) potential clearing of vegetation; (ii) labor and working conditions, including traffic safety and labor influx; (iii) nuisance like dust and noise; (iv) occupational health and safety issues related to civil works, including the risk of contamination risk from COVID-19; (v) community health and safety; and (vi) solid and liquid waste management, including chemical materials and the risks associated with increased use of agrochemicals (pesticides, fertilizers, etc.). However, most of the risks and impacts likely to be generated by the project activities will be site-specific, temporary, and manageable to acceptable levels by implementing proper mitigation measures and applying good construction industry best practices.

85. **Social Risks:** key social risks identified in the project are related to (i) land acquisition, loss of resources and income by creating ZOCAs and constructing water reservoirs in the project area; (ii) occupational health and safety, working conditions (especially for prospective community workers) and grievance management for workers; and (iii) potential risk from the use of child labor, based on experiences in the agricultural sector. Other significant risks include possible temporary or permanent physical and economic displacement because of impacts from project activities, and the exclusion (if not properly monitored) of women and girls, returnees, and other vulnerable groups, such as persons with disabilities, elders, and youth; stakeholder risks, especially in relation to adequately addressing cultural considerations and community concerns related to competing land uses and access to resources. These include concerns related to access to water and the recognition of customary land tenure and land uses, which can exacerbate conflict, as well as misgivings or mistrust among stakeholders who do not receive grants; and risks related to improper and/or the regular consultation and engagement of communities (and women) throughout the project lifecycle, including the inadequate implementation and monitoring of the project- level grievance mechanism. In addition, as several activities that involve restoring/upgrading physical infrastructures have been identified, both skilled and unskilled laborers could be brought in, which heightens certain labor- related risks involving the health and safety of workers, fair wages, and working conditions, and the protection of women workers. The World Bank due diligence assessment of the project's potential E&S risks and impacts is detailed in the Environmental and Social Review Summary (ESRS). To mitigate the E&S risks, the project prepared E&S instruments including: the project Environmental and Social Management Framework (ESMF) disclosed on June 9,

2022 within the MoA website[25], a Resettlement Policy Framework (RPF), Labor management procedures (LMP) including workers GM, Stakeholder Engagement Plan (SEP) including the project Grievance Redress Mechanism (GRM). The RPF, LMP and SEP were disclosed in the country on September 29, 2022 and on the Bank website on October 2, 2022. Site-specific plans, Resettlement Action Plan (RAP), Environmental and Social Impact Assessment (ESIAs)/Environmental and Social Management Plan (ESMP) shall be prepared before any request for proposals is issued for any sub-projects that include in part or in full civil works, as per the result of the E&S screening process in accordance with guidance provided by the project ESMF regarding the E&S screening process. The Pest Management plan (PMP) prepared for the Irrigation Initiative Support Project (SIIP) P154482 has been updated to address potential risks and impacts related to use of agrochemicals. It has been approved by the Bank and disclosed on October 12, 2022 within the MoA website.

86. **Sexual Exploitation and Abuse and Sexual Harassment (SEA/SH), including Gender-Based Violence (GBV):** The project was found to be at substantial risk of GBV by the GBV risks assessment tool. This can be explained by several factors, such as the fragile context in which the project will operate, the scale of the rehabilitation or construction activities, the installation of agricultural infrastructure, the massive influx of labor, and the project's areas of intervention, most of which have been identified precisely because of their high levels of poverty. A strategy, in accordance with the Good Practice Note (GPN), to assess risks of GBV regularly and qualitatively, and SEA/SH, will be put in place to ensure that women and girls and other groups particularly vulnerable to risks of GBV have a safe and confidential venue to report risks that are potentially created or exacerbated by project implementation (such a survivor-centered GBV-Grievance Mechanism), the development and signing of Codes of Conduct (CoC) by all project workers, training workers in the CoC and the GM, with the specific consultations dedicated to women) and follow-up throughout project implementation. As some activities will be implemented near humanitarian areas, with known high levels of GBV, the project includes some activities specifically designed to address the risk for sexual exploitation and abuse, such as those related to improving livelihoods of women and girl youth.

87. An assessment of SEA/SH risks will be conducted throughout project implementation and inform the design and regular review and update SEA/SH risks mitigation measures. In addition, the project will seek to promote greater awareness of SEA/SH, in communities, disseminating information on project-related risks, SEA/SH mitigation measures that will be put in place and response services available to survivors. The project will map out GBV prevention and response services available in the project area of influence and will develop a survivor- centered response protocol ensuring that all survivors reporting a SEA/SH incident to the project receive timely access to a minimum package of services, including health, psychosocial and legal support. The GRM will be designed to register safely and ethically, document and address SEA/SH allegations, as well as include multiple channels to initiate a complaint. GRM reports will detail the cases of gender-based violence in line with best practices on the collection and reporting of GBV-related information and contribute to the ongoing analysis of risk and the adaptation of prevention and mitigation strategies.

88. Commitments regarding the management of risks are captured in the Environmental and Social Commitment Plan (ESCP) prepared and disclosed prior to project appraisal and agreed upon with the Government of Mauritania. These commitments include among others: requirement to recruit one

[25] *https://www.agriculture.gov.mr/IMG/pdf/pgpp_padisam.pdf*

environmental specialist and one social specialist no later than **one** month from the project effectiveness date, and maintain them throughout project implementation; the obligation for contractors to prepare, as part of their contract, a Contractor-Environmental and Social Management Plan before starting with field activities, requirement for the preparation of specific E&S instruments, including the PMP, capacity building. During implementation, consultants in the areas of SEA/SH, Occupational Health, and Safety (OHS) will be recruited as required to address these specific issues.

89. **Grievance Redress Mechanism**. A project GRM has been set up as part of the project Stakeholders Engagement Plans (SEP) to receive and address all complaints that could likely arise because of project activities, receive feedback from stakeholders and beneficiaries in a transparent and timely manners. The GM will socialize with beneficiaries and stakeholders to increase understanding of its use and existence. The GM include measures for the management of SEA/SH incidents, detailing the procedures, entry points, GBV service referrals and accountability mechanisms for complainants.

90. **Citizen engagement.** Citizen engagement has been an integral part of designing the project and will remain a cornerstone of implementation and ultimately of the project's success. Citizen Engagement (CE) interventions will build on communication activities to enhance beneficiaries' voice and participation throughout the implementation of the project. Through periodic consultations and an effective grievance redress mechanism, beneficiaries' feedback will help build community ownership and thereby reinforce the project's impact and sustainability. The SEP, developed after extensive consultations with the GoM and other partners including non-governmental organizations, has provided the basis for identification of stakeholders that will be targeted by CE interventions. All key players involved in the project (including local authorities, technical ministries and departments, civil society, and the communities were consulted during preparation and aided in defining the scope of activities. Project implementation will continue to involve, among others, local, provincial, and national administrations, farmer cooperatives, as well as private agribusinesses. Citizen engagement will be monitored through surveys of beneficiaries' satisfaction with project interventions. The PIM will include a specific section on CE mechanisms and interventions such as public consultations, consultations with affected communities, focus groups. The feedback received from the periodic consultations will be integrated into the Project interventions and will inform course corrections as and if necessary, during implementation.

V. GRIEVANCE REDRESS SERVICES

91. **Grievance *Redress***. Communities and individuals who believe that they are adversely affected by a project supported by the World Bank may submit complaints to existing project-level grievance mechanisms or the Bank's Grievance Redress Service (GRS). The GRS ensures that complaints received are promptly reviewed to address project-related concerns. Project affected communities and individuals may submit their complaint to the Bank's independent Accountability Mechanism (AM). The AM houses the Inspection Panel, which determines whether harm occurred, or could occur, as a result of Bank non-compliance with its policies and procedures, and the Dispute Resolution Service, which provides communities and borrowers with the opportunity to address complaints through dispute resolution. Complaints may be submitted to the AM at any time after concerns have been brought directly to the attention of Bank Management and after Management has been given an opportunity to respond. For information on how to submit complaints to the Bank's Grievance Redress Service (GRS), please visit http://www.worldbank.org/GRS. For information on how to submit complaints to the Bank's Accountability Mechanism, please visit https://accountability.worldbank.org.

VI. KEY RISKS

92. The overall risk rating for the proposed project is considered as Substantial. The key factors for the Substantial rating are related to the following issues:

93. **Political and governance (Moderate).** The Government's security apparatus has so far been able to counter the general trend of the region as it relates to the deterioration of the security situation in the areas bordering Mali. The governance issues that have been considered in this project include: (i) limited institutional capacity to implement complex reforms, as it is the case for lands; (ii) weak country capacity in Public Financial Management (PFM) notably procurement; and (iii) elite capture during the implementation of the matching grant facilities. *Mitigation measures:* Mitigating these risks will involve a combination of policy dialogue, partnerships and flexibility in project implementation and specifically measures guaranteeing that all decisions to finance sub-projects would be conditioned on a transparent and participatory process that involves stakeholders at local level and relies on (i) robust criteria for grants eligibility; (ii) participatory M&E system that involves beneficiaries and civil society; (iii) Matching Grant Committee at regional level; and (iv) pre-screening of sub-project proposals at commune level to certify that applicants are members of the communities and are engaged in agricultural activities.

94. **Macroeconomic (Moderate).** This rating is explained in large part by the fact that the economy is expected to continue to rebound by 4.5 percent in 2022 and over the medium term. However, this may be overshadowed both by a protracted pandemic that could require additional restrictions and reduce economic activity, and by the war in Ukraine which is resulting in higher prices of imported grains and fuel, resulting in rising inflation.

95. **Sector strategies and policies (Substantial).** The Government has recently prepared several documents presenting its new strategy focused on the twin pillars of territorial community development and intensive commercial block agriculture. The project will dovetail on this strategy and the attendant risk is rated as Substantial. This rating is taking into consideration the limited capacity of the MoA (both human and financial) and complex land ownership issues in the country. *Mitigation measures:* Mitigating measures include the strengthening of the institutional capacities of the MoA, in the matter of the functional land administration, as well as support to the APIM and the DGPPP for the mobilization of private investors and the management of the whole process of concluding agreements with them in consultation with local communities

96. **Technical design (Substantial).** In view of the innovative nature of the project (ZOCA program), the risk related to technical design is rated as Substantial. *Mitigation measures:* The project will help to mitigate this risk by: (i) benefiting from lessons learned from similar operations in the region, such as PDIDAS in Senegal; (ii) implementing a comprehensive capacity-building program benefiting the main technical ministries and departments, targeting issues such as management, governance, and subsector organization, as noted earlier; (iii) relying on strong TA to be procured under the project to support the implementation of the ZOCA program; and (iv) at the initial phase of implementation of the project, relying on PMU familiar with World Bank administrative procedures and guidelines.

97. **Institutional capacity for implementation and sustainability (High).** Executing agencies exhibit significant constraints in their capacity to implement externally funded projects in Mauritania. Also, implementation involves several agencies and activities in several different locations of the project area. Furthermore, limited capacity of main beneficiaries (Municipalities, SMAEs, communities and farmers) to

play their key roles in territorial community development (Component 1) and in ZOCAs (Component 2) will make project activities implementation and sustainability challenging. *Mitigation measures:* This risk will be mitigated through: (i) the deployment by MoA and other ministries of additional staff at field level to support implementation; (ii) the establishment of regional implementation offices in each of the four *wilayas* of intervention; (iii) the active involvement of the high-level Land Resources Committee to oversee the project execution as far as land tenure is concerned; and (iv) the contractual-based approach for service delivery, as well as specialized technical assistance.

98. **Fiduciary (Substantial).** Based on experience from other IDA-funded projects executed in Mauritania, the fiduciary risks are assessed as Substantial. These risks are related to the persisting issues that affect the transparency and efficiency of the national procurement system and the number of departments involved in implementation. *Mitigation measures:* To manage fiduciary risks, management of the Designated Account and fiduciary responsibilities will be entrusted to a dedicated PMU. Furthermore, appropriate external audit arrangements will be put in place and regular training and supervision will be provided to strengthen capacities of all project actors.

99. **Environment and social (Substantial).** The project is rated Substantial for both environmental and social risks due to its planned investments in infrastructure and services in the ZOCA areas (irrigation, internal tracks, etc.), landscape management activities and other interventions supporting agriculture productivity. The rating takes also into consideration the limited capacity of the implementing agency and other stakeholders in implementation in line with ESF requirements. *Mitigation measures:* Measures to mitigate these risks are set out in the respective ESMF, RPF and GBV/SEA/SH Action Plans prepared by the Project as well as other ESF related instruments (ESCP, SEP including GM, an LMP). Key experts will be also recruited to oversee all E&S risks related to the implementation of the project: one environmental specialist and one social specialist, no later than three months from the project effectiveness date and will be maintained throughout project implementation. In addition, consultants in the areas of SEA/SH, Occupational Health, and Safety (OHS) will be recruited as required to address these specific issues during the implementation phase.

100. **Stakeholder risks (High).** The project is rated High because of tensions resulting in previous attempts to invest in large agriculture blocs and the potential for tensions/conflicts between local communities, private investor, and government which may result from any new development of agricultural land under the current land laws and regulations. *Mitigation measures:* This risk will be mitigated by ensuring that the communities involved can (i) receive recognition of ownership over customary land tenure; (ii) decide whether to make land available for investment, based on their own informed choices; (iii) secure sustained and well-defined benefits; (iv) receive fair compensation for the land (including common areas) and natural resources that they make available for investment; and (v) hold the Government and the investors accountable for their commitments.

101. Other risks include climate change risks which are rated Substantial. Mauritania has a history of extreme climate-related events with the country being affected with recurrent droughts doubled, in places, by heavy floods and including sometimes pest invasion like locust/grasshoppers that are associated with climatic factors. While highly exposed, Mauritania has extremely low capacity to respond in the case of severe climate shock. *Mitigation measures:* As part of the mitigation measure to climate change risks, the proposed project will promote the adoption of drought-resistant varieties, as well as improved water management systems and land restoration. It will also prioritize relevant investments and financing for climate- focused initiatives.

VII. RESULTS FRAMEWORK AND MONITORING

Results Framework

COUNTRY: Mauritania

Mauritania Agriculture Development and Innovation Support Project

Project Development Objectives(s)

To improve land resource management and foster inclusive and sustainable commercial agriculture in selected areas of Mauritania.

Project Development Objective Indicators

Indicator Name	PBC	Baseline	End Target
Restoration of land resources			
Land area under sustainable landscape management practices (CRI, Hectare(Ha))		0.00	5,000.00
Increased agriculture productivity			
Farmers reached with agricultural assets or services (CRI, Number)		0.00	36,000.00
Farmers reached with agricultural assets or services - Female (CRI, Number)		0.00	14,400.00
Increase in productivity of key targeted crops in irrigated areas (rice) (Metric ton)		4.50	6.50
Increase in productivity of key targeted crops in rainfed areas (sorghum) (Metric ton)		0.50	1.00
Direct project beneficiaries (Number)		0.00	72,000.00

Indicator Name	PBC	Baseline	End Target
Male (Number)		0.00	43,200.00
Female (Number)		0.00	28,800.00

Intermediate Results Indicators by Components

Indicator Name	PBC	Baseline	End Target
Community-Driven Territorial Development and Preservation			
Physical infrastructures rehabilitated/upgraded (Number)		0.00	120.00
Increase in cultivated area in project area as a result of project investments (Hectare(Ha))		0.00	2,500.00
Farmers adopting improved agricultural technology (CRI, Number)		0.00	6,000.00
Farmers adopting improved agricultural technology - Female (CRI, Number)		0.00	2,400.00
Farmers adopting improved agricultural technology - male (CRI, Number)		0.00	3,600.00
Functional income generating sub-projects one year after establishment (Percentage)		0.00	60.00
Youth < 30 years (Percentage)		0.00	65.00
Women (Percentage)		0.00	40.00
Disadvantaged groups (Percentage)		0.00	5.00
Annual real income per beneficiary derived from IGAs financed by the project (Amount(USD))		0.00	1,000.00
Women reaching this income among beneficiaries		0.00	60.00

Indicator Name	PBC	Baseline	End Target
(Percentage)			
MoA staff trained in planning and implementation of landscape restoration activities (Number)		0.00	90.00
Area provided with new/improved irrigation or climate-resilient features (Hectare(Ha))		0.00	1,500.00
Inclusive Commercial Agriculture			
Appropriate legal and institutional framework for implementation and management of the ZOCA program established (Yes/No)		No	Yes
Land and water rights inventories prepared and validated with local communities in ZOCA areas (Percentage)		0.00	100.00
Land area under project having a documented land-based (ententes foncières) open for investment (Hectare(Ha))		0.00	2,500.00
PPPs registered under the ZOCA program (Number)		0.00	6.00
Value of new private agribusiness investments registered in the ZOCA program (Amount(USD))		0.00	20,000,000.00
Total volume marketed for the smallholders and SMAES through ZOCAs (Amount(USD))		0.00	4,500,000.00
Project Management, Monitoring and Evaluation			
Grievances responded and/or resolved within the stipulated service standards for response times (Percentage)		0.00	90.00
Share of target beneficiaries with rating “Satisfied” or above on process and impact of project interventions (Percentage)		0.00	80.00

Monitoring & Evaluation Plan: PDO Indicators					
Indicator Name	**Definition/Description**	**Frequency**	**Datasource**	**Methodology for Data Collection**	**Responsibility for Data Collection**
Land area under sustainable landscape management practices	The indicator measures, in hectares, the land area for which new and/or improved sustainable landscape management practices have been introduced. Land is the terrestrial biologically productive system comprising soil, vegetation, and the associated ecological and hydrological processes; Adoption refers to change of practice or change in the use of a technology promoted or introduced by the project; Sustainable landscape management (SLM) practices refers to a combination of at least two technologies and approaches to increase land quality and restore degraded lands for example, agronomic, vegetative, structural, and management measures that, applied as a combination, increase the				

	connectivity between protected areas, forest land, rangeland, and agriculture land.				
Farmers reached with agricultural assets or services	This indicator measures the number of farmers who were provided with agricultural assets or services as a result of World Bank project support. "Agriculture" or "Agricultural" includes: crops, livestock, capture fisheries, aquaculture, agroforestry, timber, and non-timber forest products. Assets include property, biological assets, and farm and processing equipment. Biological assets may include animal agriculture breeds (e.g., livestock, fisheries) and genetic material of livestock, crops, trees, and shrubs (including fiber and fuel crops). Services include research, extension, training, education, ICTs, inputs (e.g., fertilizers, pesticides, labor), production-related services (e.g., soil testing, animal				

	health/veterinary services), phyto-sanitary and food safety services, agricultural marketing support services (e.g., price monitoring, export promotion), access to farm and post-harvest machinery and storage facilities, employment, irrigation and drainage, and finance. Farmers are people engaged in agricultural activities or members of an agriculture-related business (disaggregated by men and women) targeted by the project.				
Farmers reached with agricultural assets or services - Female					
Increase in productivity of key targeted crops in irrigated areas (rice)					
Increase in productivity of key targeted crops in rainfed areas (sorghum)					
Direct project beneficiaries					
Male					
Female					

Monitoring & Evaluation Plan: Intermediate Results Indicators					
Indicator Name	**Definition/Description**	**Frequency**	**Datasource**	**Methodology for Data Collection**	**Responsibility for Data Collection**
Physical infrastructures rehabilitated/upgraded					
Increase in cultivated area in project area as a result of project investments					
Farmers adopting improved agricultural technology	This indicator measures the number of farmers (of agricultural products) who have adopted an improved agricultural technology promoted by operations supported by the World Bank. NB: "Agriculture" or "Agricultural" includes: crops, livestock, capture fisheries, aquaculture, agroforestry, timber and non-timber forest products. Adoption refers to a change of practice or change in use of a technology that was introduced or promoted by the project. Technology includes a change in practices compared to currently used				

	practices or technologies (seed preparation, planting time, feeding schedule, feeding ingredients, postharvest storage/ processing, etc.). If the project introduces or promotes a technology package in which the benefit depends on the application of the entire package (e.g., a combination of inputs such as a new variety and advice on agronomic practices such as soil preparation, changes in seeding time, fertilizer schedule, plant protection, etc.), this counts as one technology. Farmers are people engaged in farming of agricultural products or members of an agriculture related business (disaggregated by men and women) targeted by the project.				
Farmers adopting improved agricultural technology - Female					
Farmers adopting improved agricultural technology - male					

Functional income generating sub-projects one year after establishment					
Youth < 30 years					
Women					
Disadvantaged groups					
Annual real income per beneficiary derived from IGAs financed by the project					
Women reaching this income among beneficiaries					
MoA staff trained in planning and implementation of landscape restoration activities					
Area provided with new/improved irrigation or climate-resilient features					
Appropriate legal and institutional framework for implementation and management of the ZOCA program established					
Land and water rights inventories prepared and validated with local communities in ZOCA areas					
Land area under project having a documented land-based (ententes foncières) open for investment					
PPPs registered under the ZOCA program					
Value of new private agribusiness investments registered in the ZOCA program					

Total volume marketed for the smallholders and SMAES through ZOCAs	Represent the total amount of agri-food products that has been sold by the smallholders and SMAEs through ZOCAs (component 2).	Annual			
Grievances responded and/or resolved within the stipulated service standards for response times					
Share of target beneficiaries with rating “Satisfied” or above on process and impact of project interventions					

ANNEX 1: Implementation Arrangements and Support Plan

I. PROJECT INSTITUTIONAL AND IMPLEMENTATION ARRANGEMENTS

1. **The project will be anchored within the MoA, accountable for project implementation, while MoE will have overall institutional oversight.** MoE will chair the Project Steering Committee (PSC). Day-to- day responsibility for project management will be vested with a PMU reporting to the MoA. Through the PMU, the MoA will play a pivotal role in guiding and backstopping technically the project. The PMU will have the direct responsibility for implementing activities under component 1 by mobilizing the technical support of MoA services and affiliated entities as required, as well as sub-contracting specific areas to specialized institutions and NGOs. Component 2 will be piloted by the MoE. Technical Assistance will be put in place to provide needed support to fill the capacity gap (technical design for ZOCA deployment, legal aspects, PPP process, etc.). The recently created committee for land resources will also work under the MoE to provide technical support to identify ZOCA sites and work with communities for better inclusion.

2. **Policy guidance and oversight for the project at the national level will be exercised by the PSC.** The Committee will include broad representation of government stakeholders, including representatives of ministries and national agencies, regions (*wilayas*) as well as nongovernmental organizations. The PSC will be chaired by a high-level staff of MoE. The other members of the PSC will include representatives of relevant MoE Departments[26], and representatives of the MoA and Ministry of Livestock[27], the Ministry of Finance (MoF), the Ministry of Interior and Decentralization (MoID) the Ministry of Hydrology and Sanitation (MoHS), the Ministry of Environment and Sustainable Development (MoESD), the Ministry of Oil, Mining and Energy (MOME). as well as representatives of the federations of Agriculture and Livestock. The PSC will review and approve the AWPB as well as other reports as specified in the Project Implementation Manual.

3. **At the regional level, oversight and guidance will be provided by the Regional Development Committees (RDCs) of beneficiary regions (*wilayas*) of the country, chaired by the governors (*walis*).** Guidance provided will reflect consideration of regional priorities and information available at regional level on interventions planned by other development partners and the administration in the region. The regional delegate of the MoA will provide oversight and guidance to and facilitate the work of the project at regional level.

4. **At the commune level, the *Comités Communaux de Concertation* (Commune Coordination Committees – CCCs) will be the key stakeholders tasked with ensuring that project planned activities are well articulated with the *Plans de Développement Communal* (MUNICIPAL Development Plans – PDCs).** The project will ensure that these committees are consulted and capacitated. The CCCs will be the custodians

[26] *Notably the Directorate of Public Private Partnerships (DGPPP) and the Agence de Promotion des Investissement en Mauritanie (APIM).*

[27] *Directorate of Strategies, Cooperation and Monitoring and Evaluation (DSCSE); Directorate of Statistics and Agropastoral Information Systems (DSSIA); Directorate of the Development of the Agricultural Subsectors and Extension Services (DDFCA); Directorate of the Development of Animal Sectors and Pastoralism (DDFAP); Directorate of Rural Planning (DAR); Directorate of Veterinary Services (DSV); National Center for Agricultural Research and Agricultural Development (CNRADA); National Office for Research and Development of Livestock (ONARDEP).*

of the consultation with and involvement of local communities in the project.

5. **National Project Management Unit (N-PMU).** Preparation financing for this project along with fiduciary responsibilities are being managed by the PMU of the ongoing PARIIS project at least until project effectiveness. The PPA funded the development of landscape plans and methodological manuals as well as recruitment of the core staff of the project N-PMU that will take over from the PARIIS PMU and manage the project. The staff will obtain hands on training from the fiduciary and safeguards personnel of PARIIS in preparation for their role once the N-PMU is established. The N-PMU will be capacitated for project management, technical, and fiduciary aspects, and will be institutionally housed under the MoA under the Secretary General.

6. **Responsibilities of the N-PMU.** The N-PMU will be responsible for: (i) preparation and consolidation of AWPBs; (ii) implementation, contract management, coordination, and monitoring of all project-related activities; (iii) production of periodic implementation reports; (iv) maintenance of records and accounts for all transactions related to the PMU and the project; (v) execution of the annual audit of the entire project and preparation of consolidated annual financial statements and Implementation Financial Reports (IFRs); (vi) monitoring of the various activities supported under the project, including management of the environmental and social safeguards aspects and preparation of quarterly Activity Progress Reports; (vii) monitoring and consolidation of the Monitoring and Evaluation (M&E) criteria as agreed with the Borrower; (viii) procurement and financial management (FM); and (ix) preparation and organization of the PSC meetings and the required documentation for the meetings.

7. **Staffing of the N-PMU (see Table A1.1).** The PMU will be headed by a National Coordinator who will report to the Cabinet of the MoA. The National Coordinator will be assisted by a technical team comprising all relevant disciplines (FM, procurement, M&E, gender, safeguards, M&E, communication, etc.) as well as two technical experts to cover each of the Components 1 and 2. As for governance and oversight in the regions, the existing *Comités Régionaux de Développement* (Regional Development Committees – CRDs) will monitor project implementation. Each of the MoA regional delegations in the wilayas of the project intervention area will be supported by a technical assistant to ensure the coordination and monitoring and evaluation of the activities.

8. The MoA will play the central role in implementing Components 1 and 2. MoA will play a pivotal role in guiding and backstopping technically Components 1 and 2, in the various fields of intervention, *inter alia* to enhance and sustain activities in crop, livestock, veterinary extension services, seed multiplication as well as the provision of improved livestock genetic material. The detailed roles and responsibilities of the MoA under the project will be delineated in the PIM. MoA's responsibilities will include: (i) ensuring alignment between the broader MoA policy and strategy in the targeted areas and the policy and strategic directions of the proposed project; (ii) developing a package of good practices for activities in different agro-ecological zones where the project operates; (iii) developing detailed guidelines for delivering plant health and veterinary services; (iv) providing high-level technical assistance and quality assurance support in building institutional capacity to improve the delivery of agricultural services; and (v) regularly monitoring the project's performance based on key indicators, and evaluating the lessons learned for adapting and scaling up interventions in the future.

9. The MoE will play the lead role for Component 2 activities in close liaison with other implementing structures. These activities will be integral part of the ZOCA program under the leadership of MoE's Directorate of Public-Private Partnerships (DG PPP) and will include: (i) a better definition of the ZOCA program and alignment with the Government's external investment policy; (ii) technical diagnostic of the pre-selected ZOCA sites, with the participation of the local communities: this will include prominently a

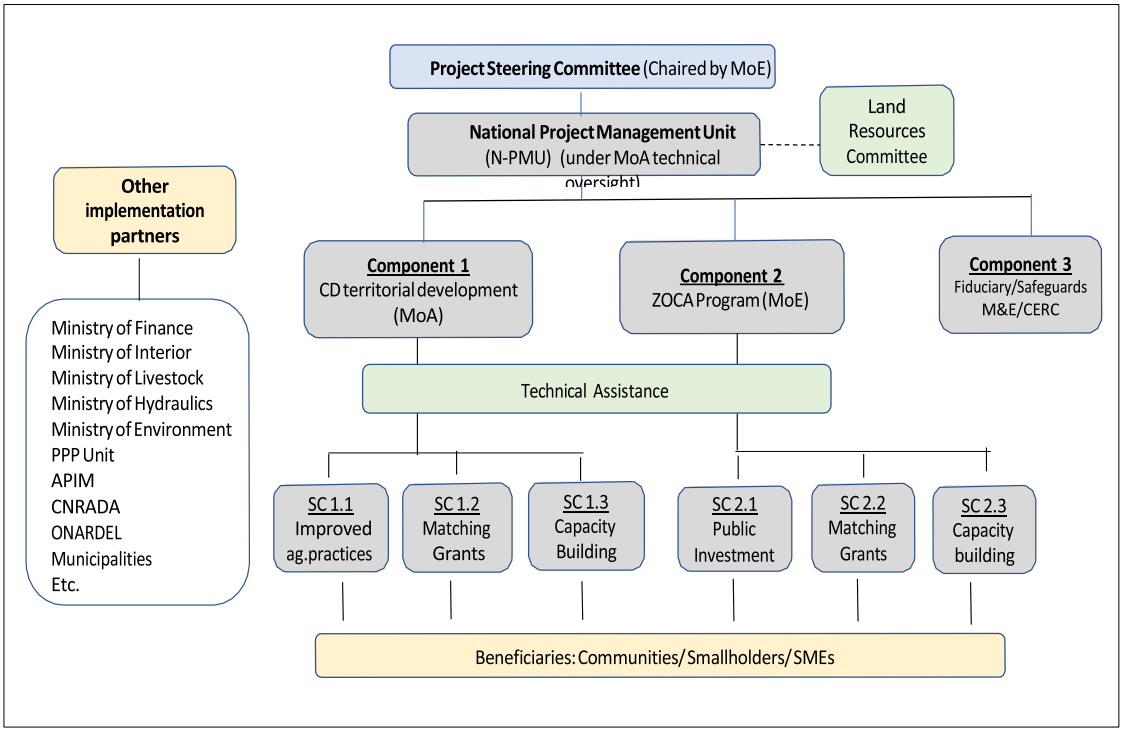
participatory assessment of the land tenure situations and the identification of the land rights both legal and customary; it will also include the required detailed surveys to determine the agricultural potential (soil surveys, mapping of water sources, identification of existing production facilities, etc.); (iii) design of the public investments to be implemented as operating framework for investors to intervene; (iv) negotiations of the PPPs to ensure a level playing field with all partners, in particular with the local communities; and (v) work execution and monitoring of the pilot ZOCA site(s) to be financed by the project. MoE, and MoA, as well as the Ministry of Interior will be involved in all negotiations having to do with land tenure in close liaison with the Technical Committee Land Resource Patrimony. The MoA and the Ministry of Hydraulics will provide technical backstopping as required to define the public investments required under the ZOCA pilot. APIM will be associated to provide operational support regarding all the above steps.

10. The project implementing dispositions are summarized in Table A1.1 and Figure A1.1 below.

Table A1.1: Project Implementing Arrangements

Project Implementation Structure	Description
PROJECT STEERING COMMITTEE (PSC)	**Oversight and guidance body at national level.** Will be chaired by the MoE, and include MoA, the Ministry of Finance (MoF), the Ministry of Interior and Decentralization (MoID), the Ministry of Environment and Sustainable Development, the Ministry of Hydraulics and Sanitation, the Ministry of Oil, Mining and Energy, as well as representatives of the federations of Agriculture and Livestock. Meeting frequency: twice a year
NATIONAL PROJECT MANAGEMENT UNIT (PMU)	**N-PMU to be responsible for day-to-day project implementation**. The N-PMU will be composed as follows, all with contracts: • One National Coordinator • One Internal Auditor • One Landscape Planning Specialist • One ZOCA specialist • One Matching Grant Specialist • One Administrative and Financial Manager - RAF • One Accountant, Assistant to the RAF • One Procurement Expert and two Procurement Assistants • One M&E Expert • One Environmental Safeguards Specialist • One Social Safeguards Specialist • One Communication Specialist • One Gender Specialist • Support staff (secretaries, drivers, guards...) • MoA staff redeployed to support the Technical Departments concerned • Technical Assistance (to be determined)
REGIONAL PROJECT STEERING COMMITTEES (R-PSCs) **TECHNICAL ASSISTANCE AT REGIONAL LEVEL**	• R-PSCs for oversight and guidance body at regional level (in association with the Regional Development Committees (CRDs) • 3 Technical Assistants to the MA Regional Delegates • For the regional coordination of project management, technical assistance will be set up within the existing regional delegations of the MA in the three Wilayas covered

Figure A1.1: Project Organizational Structure



II. STRATEGY AND APPROACH FOR IMPLEMENTATION SUPPORT

11. The strategy for supporting project implementation will focus on successfully mitigating the risks identified at various levels and supporting the risk management efforts proposed in the SORT. The approach entails close monitoring of the implementation of the project's technical design, as well as governance, fiduciary, and safeguard matters. It will consist of (i) implementation support missions; and (ii) technical assistance (TA) in areas of weakness and where new approaches and/or procedures have been introduced.

12. **Strategy to support implementation**. One of the biggest implementation challenges identified is that overall capacity of many decentralized ministerial services is weak. To respond to this challenge, and to ensure that project resources are being used effectively to achieve the PDO, the supervision strategy is composed of measures to review progress and respond to implementation issues that include the following:

    (a) *Implementation support missions.* The World Bank Task Team will conduct quarterly reviews of which at least two implementation support missions yearly to support implementation performance and progress toward the achievement of the PDO. Given the overall project design and scope, a multidisciplinary team comprising technical specialists, along with fiduciary, environmental, social, and operations specialists, will be needed to support the government in implementing the Project. Support from technical partners such as the Food and Agriculture Organization (FAO) will be sought when needed. The first implementation support mission will take place as soon as possible after IDA Credit effectiveness to provide startup support through direct and timely feedback on the quality, soundness, and acceptability of implementation plans.

    (b) *Midterm Review.* A Midterm Review (MTR) will be carried out at the end of Project Year 3. It will include a comprehensive assessment of progress in achieving the project objectives laid out in the Results Framework. The MTR will also serve as a platform for revisiting design issues that may require

adjustment to ensure satisfactory achievement of the Project's objective.

(c) *Other reviews.* Each year, the MoE and the World Bank will consider the need for additional analytical, advisory, and knowledge-sharing activities and/or third-party reviews. Such reviews will be planned over and above the semiannual implementation support missions.

(d) *Implementation completion.* At the close of the project, the World Bank will carry out an implementation completion review to assess the success of the project and draw lessons from its implementation.

13. **Objective of implementation support missions.** The implementation support and oversight missions will have the combined aim of reviewing the quality of implementation, providing solutions to implementation problems, and assessing the likelihood of achieving the PDO. More specifically, they will: (i) review implementation progress by component, including institutional development aspects; (ii) provide solutions to implementation problems as they arise; (iii) review with the PMU the project action plan and disbursement programs for the next six months; (iv) review the project's fiduciary aspects, including disbursement and procurement; (v) verify compliance of project activities with the Bank's environmental and social safeguard policies; (vi) determine progress toward the PDO against targets in the Results Framework and assess the quality of implementation by reviewing case studies and results of surveys to measure results indicators; and (vii) review the quality of capacity- building activities, which are crucial to implementing the Project effectively.

14. The missions will combine field visits, field-based focus group discussions, interactive workshops with stakeholders for feedback, and workshops to highlight implementation issues, pick up lessons emerging from implementation, and share mission recommendations, including agreements on actions moving forward. Missions will also review quarterly/annual reports and various studies.

15. *Technical assistance*. Implementation support will include technical support from the World Bank, and possibly other bilateral/multilateral agencies and consultants for critical specialized aspects of the Project, to ensure proper financial management and procurement, and to monitor social and environmental safeguards. The objective of the technical support would be to help the project teams internalize good practices and remove implementation bottlenecks as they are identified during implementation support missions. TA will include training workshops to develop core resource teams within regional implementation units and project teams, helping to finalize manuals, and reviewing and advising on terms of reference for required studies and technical support missions.

III. IMPLEMENTATION SUPPORT PLAN AND RESOURCE REQUIREMENTS

16. **Focus of support**. The first two years of implementation will focus more on technical support. Thereafter, the focus will shift to more routine monitoring of progress, troubleshooting, and assessments based on the Results Framework. The support missions will be complemented by regular short visits by individual specialists to follow up on specific thematic issues as needed.

Financial Management and Disbursement Arrangements

17. The N-PMU will be the World Bank's main counterpart and focal point for financial management aspects of the project. This includes budgeting, financial reporting, supervision, management of the Designated Account, and auditing.

18. **Budgeting arrangements.** N-PMU, in close collaboration with involved implementing partners and technical units, will prepare an initial work plan and budget for implementing project activities considering

the project's objectives. Approved activities on the budget will be captured in a Procurement Plan, which for WBG purposes will be the document driving implementation. Thereafter, the N-PMU will prepare on an annual basis (if needed), an annual work program budget (AWPB). The AWPB will be approved by the Steering Committee and submitted to the World Bank for no-objection not later than November 30 of each year proceeding the year the work plan should be implemented. Once the budget is approved, the budget execution will be monitored through the automated accounting software to serve as a basis for a budget execution monthly follow-up, based on variance analysis report comparing planned with actual expenditures that will be part of the quarterly unaudited IFR.

Accounting and Reporting Arrangements

19. **Accounting policies and procedures.** The accounting systems, policies, and administrative and financial procedures will be documented in the MOP.

20. **Accounting staff.** The FM functions will be carried out by a team including: (i) a qualified and experienced FM specialist **(**to be recruited within one month after project effective date) and a qualified and experienced Accountant. These staff shall be recruited through a competitive process in compliance with World Bank's rules **and** will have the overall FM responsibility over budgeting, accounting, reporting, disbursement, internal control.

21. **Accounting information systems software**. An accounting software with multi-project, multi-site, and multi-donor features, and customized to generate its financial reports will be setup. This software must be installed within three months after project effectiveness.

22. **Accounting standards.** The current accounting standards in use in Mauritania are acceptable to the World Bank. Even though they are not in compliance with international standards, there are no identified gaps which have significant impact on the comprehensiveness of the financial statements.

Internal Control and Internal Audit Arrangements

23. **Internal controls.** The internal control policies and procedures will be documented in the Administrative, Accounting and Financial Manual of procedures (MOP) as part of the PIM, which will be prepared and agreed to by the World Bank prior to effectiveness. The MOP will document the FM and disbursement arrangements, including internal controls, budget process, assets safeguards, and will clarify roles and responsibilities of all the stakeholders. Furthermore, a separate sub-project grant manual will describe the matching grants mechanism to be implemented under sub-components 1.2, and 2.2.

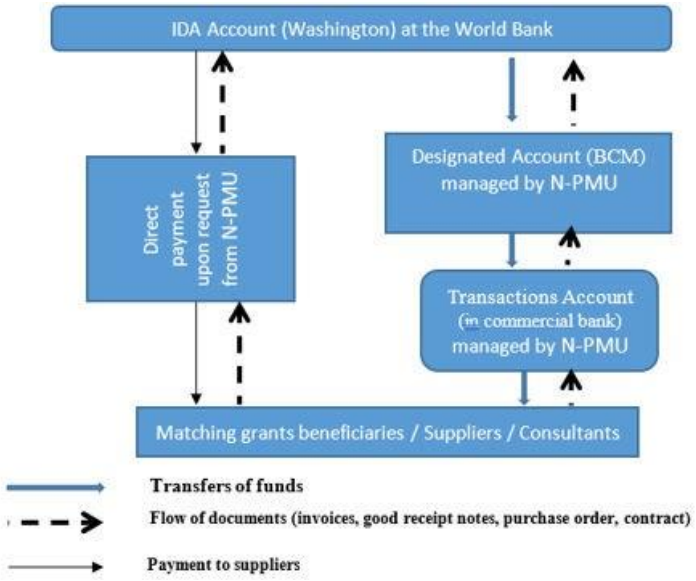
24. **Internal audit.** An experienced internal auditor will be recruited within three months after project effectiveness.

25. **Transparency, accountability, and anti-corruption efforts** will be supported via a complaint handling mechanism; a communication strategy to inform the public through the media on all aspects of the Project; and the publication on the implementing entity or Government websites of budgets, financial reports and audited financial statements. The N-PMU will also have to deal with fraud and anti-corruption in accordance with the World Bank Anti-Corruption Guidelines referred to in the Financing Agreement.

Flow of Funds and Disbursements Arrangements

26. **The designated account (DA) for the project** will be opened at the Central Bank of Mauritania. A project account in local currency will be opened in a reputable commercial Bank in Nouakchott, on terms and conditions acceptable to the Bank. The flow of funds arrangements for the project are shown in the figure below.

Figure A.1. 2: Funds Flow Diagram



Disbursement arrangements.

27. Disbursements will be made in accordance with the Disbursement Guidelines for Investment Project Financing dated February 2017. Withdrawal application requests will be prepared by the Project's FM specialist signed by a designated signatory or signatories.

28. **Disbursements under the project will be transaction-based.** In addition to making advances to the DA, other disbursement methods (reimbursement, direct payment, and special commitments) may be used under the project. Further instructions on the withdrawal of proceeds will be outlined in the disbursement letter and details on the operation of the DA will be provided in the MOP.

29. **Financial Reporting Arrangements.** N-PMU will prepare quarterly unaudited Interim Financial Reports (IFR) for the project in form and content satisfactory to the World Bank. These IFRs will be submitted to the Bank through Client connection within 45 days after the end of each calendar quarter. The FM team will prepare project financial statements in compliance with current accounting standards in use in Mauritania and with World Bank requirements.

30. **External Audit Arrangements.** The Disbursement and Financial Information letter (DFIL) will require the submission of Audited Financial Statements for the project to IDA within six months after the end of each fiscal year. The audit report should reflect all the activities of the project. An external auditor with qualifications satisfactory to the World Bank will be recruited to conduct annual audits of the project financial statements in accordance with audit terms of reference agreed upon with IDA. The related terms of reference will be submitted for the Bank's no-objection. In accordance with the World Bank policy on access to information, the Borrower is required to make its audited financial statements publicly available in a manner acceptable to the World Bank. Following the World Bank's formal receipt of these statements from the Borrower, the World Bank will also make them available to the public.

Table A.1.1: FM action plan July 2022

Issue	Remedial action recommended	Responsible entity	Completion	Effectiveness conditions
Staffing	Recruit (i) a qualified and experienced Administrative and Financial Management Specialist in charge of the project's FM activities.	N-PMU / MOA	One month after effectiveness	N
Information system accounting software	Set up a "multi-project" computerized accounting system to fit project needs and generate useful information and financial statements.	N-PMU / MOA	Three months after effectiveness	N
Financial reporting: IFR	Format, content, and frequency of the IFR will be agreed during project negotiation	N-PMU / MOA	Within 45 days after the end of each calendar quarter	N
Administrative, Accounting and Financial Manual of procedures	Develop a manual of administrative, accounting, and financial procedures (MOP)	N-PMU / MOA	Prior to effectiveness	Y
Internal audit	Recruit a qualified and experienced internal auditor.	N-PMU / MOA	Three months after effectiveness	N
External financial auditing	Appoint an external auditor with qualification and experience acceptable to IDA	N-PMU / MOA	Six months after effectiveness	N

31. **Implementation Support Plan.** FM implementation support missions will be carried out twice a year based on the substantial FM residual risk rating. Afterwards, these FM implementation support missions will be conducted once per year as soon as the FM residual risk becomes Moderate. Implementation Support will also include desk reviews such as the review of the IFRs and audit reports. In-depth reviews may be done where deemed necessary. The FM implementation support will include FM training missions for all implementing entities and will be an integrated part of the project's implementation support plan.

Table A.1.2 - FM Implementation Support Plan

FM Activity	Frequency
Desk reviews	
Interim financial reports review	Quarterly
Audit report review of the project	Annually
Review of other relevant information such as interim internal control systems reports.	Continuous as they become available
On site visits	
Review of overall operation of the FM system	Twice per year (Implementation Support Mission). Once per year as soon as the FM residual risk becomes Moderate.
Monitoring of actions taken on issues highlighted in audit reports, auditors' management letters, internal audit and other reports	As needed
Transaction reviews (if needed)	As needed
Capacity building support	
FM training sessions	During implementation and & as needed.

32. **Procurement** support. On the procurement front, the World Bank will provide implementation support to the client through a combination of prior and post-reviews, procurement training to project staff and relevant implementing agencies, and periodic assessment of the project's compliance with the procurement manual. Implementation support missions will be geared toward (i) reviewing procurement documents; (ii) providing detailed guidance on the World Bank's Procurement Guidelines; and (iii) monitoring procurement progress against the detailed Procurement Plan. Based on the recommendations of the fiduciary assessments of the implementing agencies, and in addition to the prior review supervision to be carried out from the World Bank office, the semiannual supervision missions will include field visits, of which at least one mission will involve post-review of procurement activities.

33. **World Bank's review requirements.** The thresholds for procurement methods and the World Bank's prior review requirements, are detailed below:

Table A1.3 – Thresholds for Procurement Methods

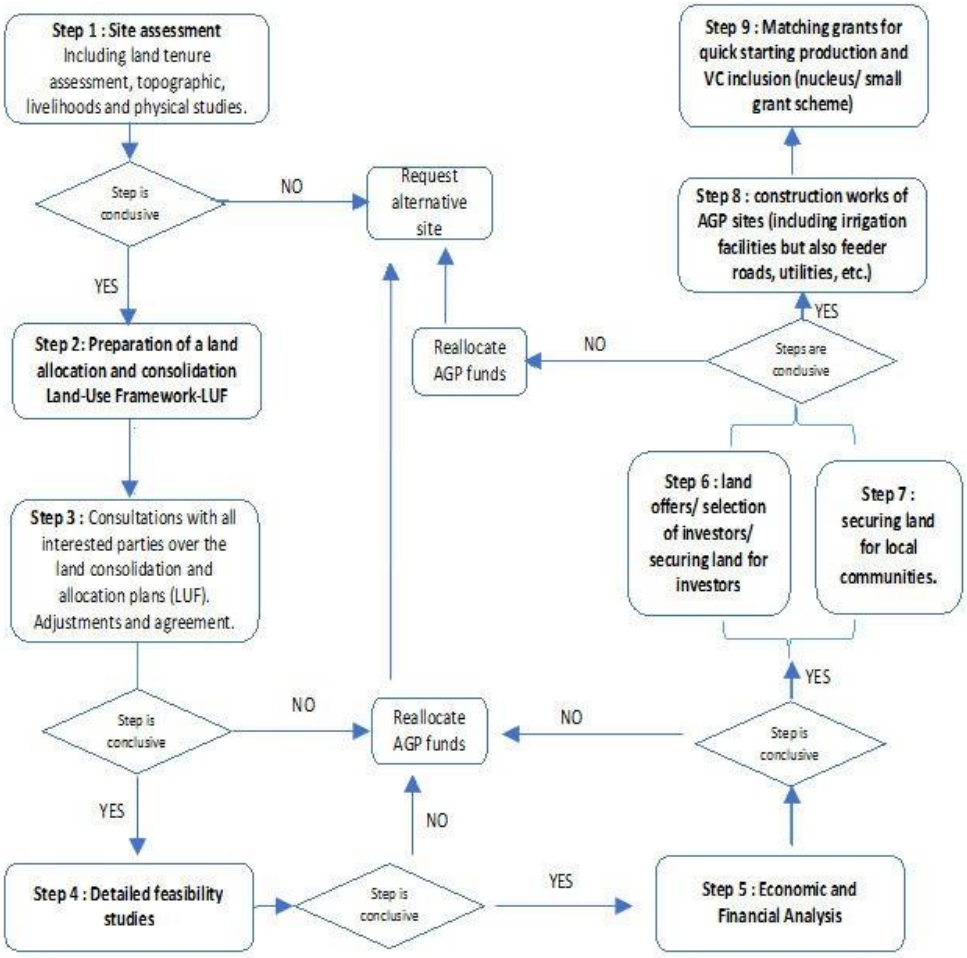
Expenditure category	Contract Value US$ (threshold)	Procurement Method	Contract Subject to prior review
1. Works	≥10,000,000	ICB	All contracts
	<10,000,000	NCB	All contracts < 10,000,000 are subject to post review
	<300,000	Shopping	NA
2. Goods	≥2,000,000	ICB	All contracts
	<2,000,000	NCB	All contracts < 2,000,000 are subject to post review
	<200,000	Shopping	NA
3. Consultants Firms	≥1,000,000	QCBS; QBS; LCS; FBS; DS	All contracts
	<1,000,000	QCBS; QBS; LCS; FBS, DS	All contracts < 1,000,000 are subject to post review (except TTL decision)
	< 300 000	CQS	NA
4.Consultants Individuals	≥300,000	EOI	All contracts
	<300,000	EOI	Prior review for project implementation staff
	<100,000	Comparison of 3 CVs	
All Terms of reference and technical specifications regardless of the value of the contract are subject to prior review. An EOI notice must be published for the recruitment of firms and individual consultants above US$100,000 and key personnel of the Project; and highly recommended for the recruitment of individual consultants under US$100,000. Note: EOI – Expression of Interest; FBS – Fixed Budget Selection; ICB – International Competitive Bidding; LCS – Least-Cost Selection; NCB – National Competitive Bidding; QBS – Quality-Based Selection; QCBS – Quality Cost-Based Selection; DS – Direct Selection and CQS – Consultant Qualifications Selection.			

34. **Safeguards.** The World Bank specialists in social and environmental safeguards will regularly participate in implementation missions to ensure a better integration of safeguards and the overall activities under the project as mandated under the ESF. In coordination with the team, they will conduct supervision of the project's safeguard activities at least twice a year, participate in regional meetings to discuss findings, and produce action plans to improve implementation.

ANNEX 2: Sequencing of ZOCA operations – Built-in decision points

1. A high degree of both rigor and flexibility will need to characterize ZOCA interventions, so that activities can easily be moved, changed, or brought to a stop. This will be achieved through sequencing of field operations based on set pre-requisites and comprehensive feasibility studies with built-in decision points (see go/no-go decision process in Figure A2.1 below). The project will perform the ZOCA diagnostics with a series of go/no-go decision points at the initial stages of the analysis and the possibility for reallocating the funds to alternative ZOCAs if analysis shows 'deal-breakers' such as unacceptable site assessment or a lack of local community interest[28].

Figure A2.1 - Sequenced approach for identifying and investing in ZOCA sites



2. The detailed steps are in the go/ no-go Table A2.2 below.

[28] *The US$ 3.95 million PPA granted to GoM includes resources for the background and pre-feasibility studies for pre-identified ZOCA sites.*

Table A2.1 - Sequenced approach to ZOCA site selection and work completion

Steps	Description
Step 1: Site assessment	• Topographic, hydrological survey, soil survey, identification, and mapping of existing socio- economic infrastructure. • Environmental assessment (identification of natural areas, fragile and protected areas, etc.). • Land tenure assessment: Includes an inventory of all existing land uses and land right claims (formal and customary). Includes claims over non used lands, as well as grazing rights, corridors, etc. • Water use assessment: Includes an inventory of all existing uses (or restrictions) of existing sources of water (ground and surface, natural and artificial - such as wells) including customary rights, custodian organizations, water user formal or informal associations, formal and informal rules of access and conflict resolution mechanisms, etc. • Household livelihoods assessment (agriculture and livestock, all self-subsistence and income generating activities practiced on site, including harvesting of natural resources and products). Includes demographic data, village and settlements identification, poverty data. Could include a baseline survey. • Rapid identification of the infrastructures essential to the development of the identified blocks in the fields of water, energy, and access roads. • Preparation of maps.
Decision Point 1	**'Go':** • All assessments conducted and of acceptable quality (independent third party verified). • Citizen Engagement Plan satisfactorily applied during the assessments (WB field mission checked). • Studies are made public. Contents of the studies are presented in public in presence of communities, CBOs, NGOs, etc. • No major technical red flag (such as insufficient water availability, soil unsuitability, problematic topography, etc.) • No significant social 'red flag' such as a site specific ongoing (or history of) land use conflict, evidence of land grabbing by local elite in anticipation of the project, or undue pressure applied by any authority over local communities, evidence of evictions. No significant population displacement foreseen or disturbance to important cultural/ holly sites. • No significant environmental 'red flag'; i.e., declassification of classified forests, natural park, etc. • Land Certificate established in favor to communities over customary land. **'No go':** • Any 'go' condition (above) not met including but not limited to: – Some assessments could not be conducted. – The quality of some studies is not satisfactory / some are incomplete or cannot be verified by third party / the Bank. – Information presented is in contradiction with other available sources of information.

Step 2: Preparation of a land allocation and consolidation plan ('Land Use Framework')	Preparation of one or more land consolidation and allocation plans/ scenarios (LUFs) for each site. The plan(s) will have to present and schematize the global development plan of the site, present its functioning, the indicative vocation of the different sub-sites or blocks, the main infrastructures (service, agricultural water, electricity), the distribution of the irrigated blocks by type of user (local communities, large farms). This will be accompanied by notes and diagrams/mass plan, summary maps.
Decision Point 2	**'Go'**: The documents are realistic and of acceptable quality (expert checked). WB missions allowed to visit site **'No go'**: Above conditions not met
Step 3: Consultations with all stakeholders over the land consolidation and allocation plans. Adjustments and agreement.	This step consists of conducting *in situ* land consolidation and allocation plan presentation sessions, consultations, and negotiations with interested stakeholders (including investors, local governments, land, and resource user communities of the identified sites, including non-resident communities such as pastoral communities, etc.). These consultations should result in a finalized version of the plans, supported by clear stakeholders buy-in. These plans clearly allow for the identification of the portions of land that would be available for lease to investors.
Decision Point 3	**'Go'**: • All interested parties consulted following agreed upon stakeholders, consultations / citizen engagement plan. • The finalized land consolidation and allocation plan (LUF) is acceptable and meets the demand of interested parties. • A finalized land consolidation and allocation plan is available and of acceptable quality. '**No go'**: conditions above not met.
Step 4: Detailed feasibility studies	• All detailed feasibility studies to be conducted including costing of all components. – Includes environmental impact assessments. – Includes relocation plans for affected communities. – Includes compensation plan for affected communities. • Preparation of detailed maps that can also serve as a basis for steps 6 and 7 • Preparation of bidding documents for works.
Decision point 4	**'Go':** • All feasibility studies prepared and of acceptable quality. • No major technical issue. No major issue attached to the relocation and compensation plans.
Step 5: Economic and Financial Analysis	• Full EFA to be conducted by economists and financial analysts with relevant sensitivity analysis.
Decision Point 5	**'Go'**: Acceptable ERR/IRR **'No go'**: Above condition not met.
Step 6: Land offers / selection of investors / land use agreements / Tripartite Partnership	• Preparation of land offers • Advertising and marketing plan • Selection of investors • Securing of investors (land leases) • Signing of Public-Private Partnership (PPP) agreement

Decision Point 6	**'Go':** • 'Offres foncières', i.e., land parcels made available by communities, issued, and publicly offered for bids • Qualified investors selected, meeting selection criteria such as experience, co-financing, loan agreements, etc., including (i) proven high level technical and managerial know-how, and excellent financial capacity; and (ii) credible, feasible and coherent business plan aligned with the Government's strategy for ZOCA development • Due diligence: investors selected have appropriate community engagement plans, corporate social responsibility plans, no track record of unresolved conflicts with communities, no prior participation in unlawful land eviction, environmental crimes, etc.; they agree to adhere to responsible investment practices under the UN Responsible Agricultural Investment (RAI)/Voluntary Guidelines on Land Tenure (VGGT) • 'Sécurisation foncière' satisfactorily completed: land leases signed (long-term lease, conditioned by detailed specifications to ensure that these lands are developed in an optimal and sustainable manner). Documents are made public.
<u>Step 7:</u> **Land tenure security for local communities**	• Preparation of detailed land allocation maps. • Issuance of individual land documents / certificates covering all individual plots allocated to smallholders within the ZOCA irrigated area.
Decision Point 7	**'Go'** • Detailed maps of acceptable standards and comprehensive. • Implementation of relocation and compensation plans fully completed. • Individual land documents issued for all smallholders within the irrigated blocks allocated for communities. • Women and youth issued land documents as per plan **'No go'**: Above conditions not met.
<u>Step 8</u>: Construction works on ZOCA blocks (including irrigation facilities, feeder roads, utility connections, etc.)	• Bidding • Works • Reception of works
Decision Point 8	**'Go'**: • All works completed (or tranches if blocks are constructed by tranches) • All works expected to be completed with investors financing tendered and completed. **'No go'**: Above conditions not met.
<u>Step 9</u>: **Matching grants for production sub-projects and VC inclusion (Small Grant Program)**	• Capacity building for smallholders, establishment of Farmers' Groups/ GIEs • Preparation of sub-projects (Smallholders, FGs, and GIEs) • Funding of sub-projects
Decision point 9	**'Go'**: Sub-projects prepared and selected **'No go'**: Above condition not met.

3. The above basic sequencing diagram for go/no go decisions regarding ZOCA investments will be detailed in the PIM and integrate the work and decision stages relating to:

   a) The procedures and rules of the World Bank safeguards for environmental and social protection;

   b) The Principles for Responsible Investment in Agriculture and Food Systems established by the Committee on World Food Security (RAI/CFS);

   c) The Voluntary Guidelines for Responsible Governance of Tenure Systems (VGGTs) applicable to Land, Fisheries and Forests in the Context of National Food Security; and

   d) The Mauritanian legal framework governing land tenure.

ANNEX 3: Economic and Financial Analysis (EFA)

I. ANALYTICAL APPROACH AND KEY ASSUMPTIONS

1. Because of the diversity of the project landscape systems and the demand driven nature of the project's activities, the project's profitability analysis is based on illustrative farm budgets of the highly likely scenarios. Investment models were prepared for project beneficiaries in selected income generating activities (poultry, cattle, goats, vegetable production, vegetable transportation, and small agribusinesses), selected sustainable land management practices (sand dunes fixation, small earth dams, medium water infrastructure, tessa planting pits, and VG stripes), and selected climate smart agricultural practices (compost production, conservation tillage, natural regeneration, and assisted regeneration). Investment models were also prepared for medium and large investors in the ZOCA zones based on the likely cropping patterns. The analysis used a 'with and without' project approach to determine attribution to the project. The financial analysis primarily evaluates the impact on project participants, whereas the economic analysis assesses project benefits to the national economy. GHG emissions are computed separately using the EX-ACT software and incorporated into the overall economic analysis.

2. Adjustments were made to financial prices to derive economic prices from financial prices, including deducting direct subsidies and taxes. Also, for internationally traded goods (such as cereals), farm-gate import parity prices were calculated using international reference prices. For non-tradables, a standard conversion factor of 0.9 was applied to the local price component. The exchange rate used in the analysis is MRU 37.15 per US$1.0. The project's economic benefits are assessed over 15 years, using the opportunity cost of capital of 6 percent.

3. The data used in this analysis are from multiple sources including: (i) ongoing projects, notably the Inclusive Value Chains Development Project and the Value Chains Development Program for Poverty reduction supported by IFAD[29]; (ii) Implementation Completion and Results Reports of the World Bank and GEF supported Community-based Rural Development Project (P081368) and Community-based Watershed Management Project (P087670); (iii) TERRAFRICA's "Sustainable Land Management Guide" regarding SLWM practices[30]; (iv) the National Center for Agricultural Research and Agricultural Development [31]; (v) the Sustainable and Inclusive Agribusiness Development Project (P124018) which is a similar project that was implemented in Senegal's northern area adjacent to the Mauritanian border[32]; (vi) several online resources such as FAOSTAT and NUMBEO; (vii) the National Office of Statistics (Mauritania); and (viii) "Banque Centrale de Mauritanie" (Mauritania Central Bank).

Key Assumptions pertaining to IGA, SLM, and SCA under Component 1

4. Out of the total budget of US$17.5 million for Component 1, US$14.5 million is assumed to be invested in IGA, SLM and CSA practices in a ratio of 40 percent, 30 percent, and 30 percent respectively. Several assumptions related to expected output levels, other likely benefits, and prices are presented in Table A.3.1.

[29] *These projects are commonly referred to using their French appellation: « Projet de Développement de Filières Inclusives (PRODEFI)» and « Programme de Lutte contre la Pauvreté par l'Appui aux Filières (ProLPRAF) »*

[30] TerrAfrica *is a regional initiative under CAADP/NEPAD to enable governments of Sub-Saharan Africa (SSA), the international development community and other global, regional, and national stakeholders to better coordinate efforts to up-scale the financing and mainstreaming of effective and efficient country driven Sustainable Land and Water Management.*

[31] *Centre National de Recherche Agronomique et de Développement Agricole, Acronym: CNRADA.*

[32] *Implementation Completion and Results report (ISD 53340-sn; TF-16708), IDA grant of US$ 80 million and a GEF grant of US$6 million for the Senegal - Sustainable and Inclusive Agribusiness Development Project (PDIDAS), October 22, 2021.*

Table A.3.1 - Assumptions pertaining to IGA, SLM, and CSA Practices Under Component 1

Topic	Description
Income generating activities (IGA)	
Poultry	The price of chicken is assumed to be MRU 200 (US$5.33) and an egg MRU 10 (US$0.27).
Goat	The prices of goat milk, manure, and live animals for meat are assumed to be respectively MRU 75 (US$2.00) per litre, MRU 20 (US$0.54) per bag, and MRU 8,000 (US$215) per animal.
Cattle	The prices of cow milk, manure, and live animals for meat are assumed to be respectively MRU 50 (US$1.35) per litre, MRU 20 (US$0.54) per bag, and MRU 9,000 (US$242) per animal.
Vegetables	Vegetable yield is assumed at 6,520 kg/ha, and the price at MRU 1.90/kg (US$0.05) on average.
Retail business	These are small agribusinesses of around MRU 600,000 (US$16,150) in annual sales
Vegetable transport	This vital activity is projected to have a business turnover of about MRU 450,000 (US$12,000).
Sustainable Land Management (SLM) Practices[33]	
Sand Dune Stabilization	For stabilizing 100 ha of sand dunes, establishment costs and maintenance costs are assumed at MRU 66,000 (US$1,777). Incremental yields from improved soil quality are estimated at MRU 22,000 (US$592) annually.
Tessa Planting Pit	For 166 ha of Tessa planting pits, establishment costs and maintenance costs are assumed at MRU 26,500 (US$ 13), with benefits of around MRU 6,500 (US$173.33) annually.
Small earth dam	Small earth dams, costing MRU 100,000 (US$2,692) are assumed to lead to annual incremental benefits of about MRU 26,200 (US$705).
Medium scale water infrastructure	It is assumed that medium scale water management infrastructure costing around MRU 500,000 will lead to MRU 23,000 (US$619) in incremental benefits.
VG stripes	Covering 100 ha of land with cross slope barriers at a cost of MRU 14,000 (US$ 377) is expected to increase crop yield worth MRU 7,000 (US$188) annually.
CSA practices	
Compost production	Production and use of organic manure on 10 ha could increase productivity and manure sales for a net income of about MRU 1,465,000 (US$3,900) annually.
Natural Regeneration	Whereas an investment of MRU 60,000 (US$1,615) in natural regeneration is projected to trigger MRU 6,500 (US$175) in annual benefits, these benefits are projected to increase to as high as MRU 70,000 (US$1,884) annually beginning around the 6th year.
Assisted Regeneration	An investment of MRU 1.3 million (US$35,000) could increase biomass that generates MRU 390,000 (US$10,500) in net earnings annually.
Conservation Tillage	An investment of MRU 930,000 (US$ 25,000) is projected to increase yield worth around MRU 200,000 (US$5,400) annually.

5. Since project activities are demand-driven, it is not possible to determine *a priori* the relative proportions of the various activities. However, based on other similar projects in Mauritania and in the sub- region, the likely distribution of the project activities is presented in Table A.3.2.

[33] *This section draws heavily from TERRAFRICA's Sustainable Land Management Guide*.

Table A.3.2 - Summary of proportions and cost assumptions for IGA, SLM, and CSA interventions

	Name	Activity's percentage share of the costs of the sub-component	Cost (US$ Million)
IGA intervention			**5.80**
	Poultry	15%	0.87
	Goat	25%	1.45
	Cattle	25%	1.45
	Vegetable farming	15%	0.87
	Vegetable transportation vehicle	20%	1.16
Sustainable land management (SLM)			**4.35**
	Tessa planting pits	10%	0.44
	Medium watershed infrastructures	50%	2.18
	Small earth dams	15%	0.65
	Sand dunes stabilization	10%	0.44
	VG stripes	15%	0.65
Climate smart agriculture intervention			**4.35**
	Compost production	25%	1.09
	Conservation tillage	25%	1.09
	Natural regeneration	25%	1.09
	Assisted Regeneration	25%	1.09

Key Assumptions pertaining to activities under Component 2

6. Potential benefits under the ZOCA program. In the ZOCA blocks, the exact area distribution of the possible cropping and enterprise activities will be determined by the investors themselves, based on their individual business plans. The following main crop groups are assumed across the ZOCA blocks, for both the domestic and export markets: (i) cereals (rice, maize, and wheat); (ii) horticultural crops (tomatoes, onions, and potatoes); and (iii) fodder crops (especially Alfalfa). Investors might also grow legumes (groundnuts, cowpeas), and raise some livestock. To quantify the benefits, assumptions were made about typical annual cropping plans (Table A.3-2) taking into consideration: (i) the need to rotate crops to preserve soil fertility and disrupt pest cycles; (ii) the suitability of certain crops to grow in pre-determined seasons (e.g., rice during rainy seasons, or wheat during the dry cool season); and (iii) demand profiles and trends for various crops. Crop cultivation will be conducted under full or partial irrigation control, and to the extent possible using techniques to economize water use (e.g., hydroponics, drip irrigation).

Table A.3.3 - Indicative Production Plan at Steady Stage

	Rainy Season (Jul. - Oct)	Cold Dry Season (Nov. - Feb.)	Hot Dry Season (March - June)
Total Cultivated area	100%	75%	50%
out of which			
Cereals			
Rice	50%		
Maize	50%		
Wheat		50%	
Horticulture			
Tomatoes		10%	25%
Onions		10%	25%
Potatoes		10%	
Fodder			
Alfalfa		20%	50%

7. Since the selection of the two ZOCA blocks to be financed under the project is still being finalized, the EFA focusses on two of the six pre-identified sites: Boghé-Thienel (2,016 ha) and Bababé (724 ha). It is assumed that 80 percent of the land will be allocated to the large investors, and 20 percent to the small and medium agri- entrepreneurs.

8. **Characteristics of large investors.** The estimated outlays to be borne by the investors are in three areas (Table A.3.3): (i) tertiary irrigation infrastructure at the plot level to complement the primary investments financed by the project; (ii) light infrastructure (including internal utility connections, road tracks, warehouses, drying areas, etc.) to complement the basic primary infrastructure set up by the State under project funding; and (iii) investments in heavy machinery and permanent working capital (for inputs and supplies).

9. **Characteristics of the Small Grant Program.** The SGP will associate small-medium agri-entrepreneurs (SMAEs) to large investors so that they eventually work together ideally under contractual arrangements whereby the latter will provide services and buy the crops from the former under win-win partnerships. The cropping pattern of the small agri-entrepreneurs on their plots of 10 ha for the purpose of the EFA is assumed to be like that of the larger farmers. The total cost of the investment package for each SMAE sub-project is assumed to be US$75,000, comprising small equipment and an annual package of inputs (permanent working capital). Investment outlays, particularly related to primary infrastructure investments, will be covered by the project. The SMAEs will receive funding in one shot in the form of a matching grant covering 60 percent of the cost of their sub-projects or a grant of US$45,000 each, whichever is lower. The beneficiaries are estimated to number about 44 for the ZOCA blocks financed.

Table A.3.4 – Investment Costs by PADISAM, Large Investors, and Agri-Entrepreneurs

Total area (Boghé 2,016 ha, and Bababé 724 ha)	PADISAM (80% usable area) (public investments)	Large Farmers (80% area)	Agri-Entrepreneurs (20% area)
2,740 ha	2,192 ha	1,754 ha	438 ha
	Costs (US$)		
Primary and secondary irrigation infrastructure	13,152,000		
Public infrastructure	5,480,000		
Tertiary irrigation infrastructure		8,768,000	2,192,000
Complementary infrastructure		2,630,400	657,600
Agricultural equipment and working capital		5,260,800	
Production package, including small equipment			438,400
Sub-Total	18,632,000	16,659,200	3,288,000
Adjustment for 60% subsidy to SGP	+1,972,800		-1,972,800
Grand Total PADISAM and partners	**20,604,800**	**16,659,200**	**1,315,200**

II. SUMMARY OF THE ANALYTICAL FINDINGS

A) Financial and economic analysis of selected IGA, SLM and CSA

10. The analysis from the investment models shows that the investments in all IGA, CSA and SLM practices are financially and economically viable. Financial rates of return from the investments for the various production units range from 20 percent to 60 percent, whereas the economic rates of return from these investments

range from 20 percent to 51 percent (Table A.3.5)[34].

Table A.3.5 - Financial and Economic Rates of Return from the Ex-Ante Efficiency Analysis

Investments	Capital Investment (MRU '000)	FIRR (%)	FNPV (MRU '000)	EIRR (%)	ENPV (MRU '000)
A. Income Generating Activities (IGA)					
Poultry	70	39%	381	32%	186
Cattle	16	37%	351	27%	207
Goats	15	29%	55	27%	51
Vegetable farming	4	47%	59	36%	49
Vegetable transportation vehicle	5	43%	58	35%	59
Retail businesses	120	36%	216	36%	198
B. Sustainable land management practices					
Sand dunes stabilization	66	25%	111	35%	163
Medium scale water infrastructure	100	20%	104	25%	142
Small earth dam	100	20%	142	28%	175
Tessa planting pit	27	33%	42	27%	42
VG stripes	14	60%	36	51%	36
C. Climate Smart Agriculture					
Compost production	1,200	30%	736	20%	3,226
Small scale conservation tillage	930	28%	1,173	24%	1,173
Natural regeneration	60	28%	334	24%	479
Assisted regeneration	1,300	40%	2,459	32%	2,764

11. The planned activities are confronted with various risks, such as livestock epidemics (e.g., Avian Influenza among poultry), extreme weather events, etc. some of which might be devastating. But as noted in Table A.3.6, these project activities remain viable in the face of modest shocks, such as a 10 percent reduction in expected revenue, or a 2 year-investment delay.

Table A.3.6 - Sensitivity Analysis of the Ex-Ante Efficiency Analysis (All Investment Models Together)

Topic	FIRR	EIRR	FNPV (MRU, Million)	ENPV (MRU, Million)
Baseline	32%	26%	1,984	1,509
10% decrease revenue	25%	21%	1,492	1,060
2-year delayed return	20%	20%	1,177	1,119

B) Financial and economic analysis of activities under the ZOCA and Small Grants Program

12. Financial Analysis. The FIRR for the large farmers is estimated at 61 percent with an NPV of US$66.4 million, whereas the FIRR for the SMAEs is estimated at 88 percent with an NPV of US$8.8 million (Table A.3.7)[35]. Although SMAEs are assumed to have the same cropping pattern as the large investors, their yields are likely

[34] *These are Production Units. For instance, "Poultry" refers to a production unit of 700 egg-laying birds, for an investment outlay of MRU 70,000.*
Similarly, "Cattle" refers to a production unit of 2 cows/buffalos for a capital investment outlay of MRU 16,000, etc.
[35] *Financial NPV computation used a 12 percent discount rate to reflect the cost of borrowing for private investors.*

to be lower because of likely differences in technical know-how and financial resources, hence lower revenues per ha than for the large investors, on average. However, since they receive a subsidy of 60 percent of their investment outlays (including their permanent working capital), the profitability of their sub-projects is substantially higher. The above results are conservative since the revenues generated by the ZOCA blocks will also come from activities other than the crop enterprises considered in this analysis, particularly livestock and dairy activities, fruit production and production of other vegetable crops (okras, peppers, melons, etc.) which have significant market outlets in Mauritania.

13. **Results of the Economic Analysis.** The estimate for the Economic Internal Rate of Return (EIRR) is 27 percent for an NPV of US$30.7 million. Like in the case of the financial analysis, the results of the economic analysis are conservative since they only consider selected cropping activities.

Table A.3.7 – Summary Results of the EFA for Component 2

Description	Financial Analysis		Economic Analysis
	Large Investors	Small and Medium Agri-Entrepreneurs	Combined (Large and SMAEs)
FIRR	61%	88%	27%
NPV (US$, million)	66.4	8.8	30.7

14. **Sensitivity analysis.** These results are also robust in the face of modest exogenous shocks (TableA.3.8). The switching value of the combined effect of two adverse events – a decrease in prices and increase in cost – is about 27.5 percent.

Table A.3.8 –Sensitivity Analysis for Component 2 Economic Evaluation

Description	EIRR	NPV (US$ million)
Basic scenario	27%	30.7
30% increase in investment costs	14%	8.9
30% decrease in output prices	17%	15.7

C) Combined financial and economic analysis the whole project

15. The EIRR for the whole project is estimated at 27.5 percent, with a corresponding NPV of US$45.6 million (Table A.3.9). These results are robust, with the project remaining viable when costs go up, or revenues go down by as much as 30 percent.

Table A.3.9 - The Financial and Economic Analysis for the Project

Description	EIRR	NPV (US$ million)
Basic scenario	27.5%	45.6
30% increase in costs	20.4%	33.5
30% decrease in prices	18.1%	19.7
30% increase in costs and 30% decrease in prices	12.5%	7.6

16. The FAO EX-ACT tool was used to assess the environmental benefits related to the activities that will reduce GHG emissions, sequester carbon, and mitigate the effects of climate change. The GHG calculation was based on the agroecological zone where the project is being implemented (tropical dry climate) as detailed in Annex 5 of this PAD. The Ex-Act results show that the project is expected to sequester 960,124 t CO_2e per year. EIRR and NPV have been re-calculated to include the climate co-benefits[36]. Under the

[36] *Based on: World Bank. 2017. Guidance Note on Shadow Price of Carbon in Economic Analysis.*

low shadow price of carbon scenario, GHG mitigation benefits are valued at US$ 41 per tCO_2e in Year 1, gradually rising to US$ 55 per tCO_2e in Year 15. Under the high shadow price of carbon scenario, GHG mitigation benefits are valued at US$82 per tCO_2e, rising to US$ 110 by Year 15. The project's economic viability shows a marked improvement when climate benefits are included, as shown in Table A.3.10.

Table A.3.10 - Estimate of Environmental Benefits from GHG Reductions

Topic	EIRR	NPV (@6%, US$ Millions)
Baseline	25.1%	54.8
Including CO_2 benefits – at low Carbon price	30.0%	66.6
Including CO_2 benefits – at high Carbon price	34.0%	78.4

ANNEX 4: Gender Analysis and Activities

1. Gender gaps in Mauritania are still deeply entrenched and crosscut many sectors. There are prevailing inequalities in terms of access to education and health, and large gaps in relation to labor and employment. Some key human capital barriers affect the participation of women in the economy. Despite the progress made in the enrolment of girls in school, girls obtained lower scores and had a lower level of educational attainment than boys. This is due to several reasons, including early marriage and pregnancy, which force girls to leave school at a very young age. Both events have serious consequences for their health and that of their children, as well as for their cognitive development.[37] The lower levels of education, as well as early marriage and pregnancy have implications for ability to seek out income and productive activities.

2. Women play a significant role in agricultural production in Mauritania, particularly close to the household and for the households' consumption being key players in the food security of their families. Women farmers, when organized in cooperatives are more likely to access legal land titles and productive resources. But high illiteracy, lack of information, social norms, and lack of financial inputs heavily skew women's ability to further access economically productive activities. Furthermore, it is noted that women have not benefited from agricultural investments specifically designed to encourage them. When programs are not specifically designed to account for gender barriers and constraints, they miss out on reaching them.

Gender gaps related to the project

3. ***Access to Land and Agricultural Resources:*** Women's access to land rights has been improving slightly but remains a major barrier to women's potential for economic gains in the agriculture sector. While existing law does not specify any issue with women landowners or registration, and the government supports the registration of women's communal and individual land, actual practices can sometimes be discriminatory and there are no mechanisms to specifically prevent this. The de-facto exclusion of women from land management structures and local land conflict management commissions is a key hurdle for creating the environment for women to seek out titles or registration. Women hold only 8 percent of the registered title deeds, mostly in cities where customary practices are less influential, and women tend to be more independent and vocal.[38]

4. ***Institutional and Regulatory Gaps and Reforms:*** Legal, regulatory, and institutional hurdles remain a barrier for women to achieve their full potential in all sectors, including agriculture. The report "*A Better Future: Accelerating Economic Recovery by Unlocking Women's* Potential, Mauritania's Fourth Economic Update", highlights some key gender inequalities, serious gender gaps and points to avenues to address them. There are significant policies and reforms that could play a role in the income disparity. Legal and policy reforms are needed to make the workforce and labor opportunities more open to women including on issues such as childcare, maternity benefits, gender-based-violence, discrimination etc.

5. ***Access to Credit and Productive Resources:*** Gender-based discrimination is still not specifically prohibited and affects access to credit, jobs, labor conditions and other. The recent economic update report suggests that many avenues to increasing women's gains and equality will be through addressing

[37] https://www.worldbank.org/en/country/mauritania/publication/mauritania-economic-update-why-it-is-essential-to-enable-women-to-participate-fully-in-economic-activity

[38] *World Bank/ UN Women. 2015. Women's Access to Land in Mauritania: A Case Study in Preparation for the COP, p. 9. URL: URL: https://landportal.org/library/resources/women%E2%80%99s-access-land-mauritania-case-study-preparation-cop*

some of the underlining conditions that limit their participation. This includes reforms to ensure adequate protection against the various forms of gender-based inequality and violence by: (i) adopting legislation on violence against women and protection against child marriage; (ii) abolishing the requirement of obedience to allow women to be heads of household on the same basis as men; (iii) increasing maternity leave benefits, introducing paid parental leave and prohibiting the dismissal of pregnant women; (iv) allowing women to work in the same types of jobs as men and make their own; (v) prohibiting gender-based discrimination in access to credit; and (v) introducing into the law the principle of "equal pay for work of equal value" into the law. In addition, women should be specifically targeted to easily access productive resources, such as investments in infrastructure for land improvements to raise and diversify agricultural production, tailor women and girls for technical trainings usually oriented primarily to men while women are responsible for major agricultural production and postproduction activities, and finally modern inputs and mechanization.

6. ***Women's Participation and Voice over Resources***: Representation has increased for Mauritanian women, especially at a higher level (such as in parliament where there has been an increase from 3 percent to 20 percent between 2000 and 2018) but at local and community level, these changes are not reflected. Customs and norms that may be discriminatory still limit women's actual participation in local committees in rural areas and from decisions over natural and productive resources in their communities: Social norms, which tend to confine girls and women to the roles of wife, mother, and housewife, are often at the root of the disadvantages they face.

Project Actions:

7. The project has developed an extensive action plan that will ensure that projects activities reach women. These are described in Table A.4.1 below.

Table A.4.1 - Gender Tag Results Chain Breakdown

Gender Gap	Action	Captured by Indicator	Gender Strategy Pillar
Women's access to productive income assets	Quota of 50% women beneficiaries of IGA Identify low-cost technologies for women's IGAs (sewing machine, improved beehives, processing technology, grain grinding mills, etc.). Training will be associated to all equipment provided.	• Number of grants, segregated by youth, women and groups	Assets and livelihoods
Women's lack of representation and voice	Matching Grant Committees have minimum number of Women on Committee Train women in the management of infrastructures and provide leadership skills to participate in project committee	• Minimum of 40 percent representation	Voice and Representation
Gap in jobs and gender friendly workplaces	Ban any existing practices of paying women less than men for construction work and require equal pay for equal work. Support women's access to necessary training for employment and entrepreneurship opportunities by providing enabling spaces where timing, childcare, cultural norms are considered.	• Equal pay for equal work	More and better jobs
Women's lack of access to information and productive resources	Tailor trainings to women needs at a convenient place with flexible hours	• Number of trainings provided	Assets and livelihoods
Gender Actions by Component			
Components	**Actions**		
Component 1: Community territorial development and preservation			

Sub-Component 1.1: Sub-watershed level landscape planning and restoration	• Include practical trainings on gender in agriculture and gender-based violence as part of the preparation for planning and sensitization of the community on the project. • Include specific sessions dedicated to women needs and specificities during participatory planning for the preparation of the sub-watershed level plans. • Involve women in the design and rule of use of infrastructures. • Train women in the management of infrastructures and provide leadership skills to participate in O&M committee of infrastructures. • Identify in the plan and finance irrigation as a multi-use system (MUS) entry-point (based on design): irrigation systems are redesigned and developed in such a way that non-irrigation uses – both productive and domestic – can be accommodated. • Anticipate drafting specific guidelines for women considering communication channels and their needs for specific technologies/practices.
Sub-Component 1.2: Augmenting and diversification of the local income base.	• Set quota of 50 percent women IGAs (individuals and CIGs) • Set lower or minimal criteria for application for women or women groups for IGAs • Tailor trainings on leadership and business management skills to women needs at a convenient place with flexible hours for women trainings • Reward wilayas performing well in terms of women IGAs and supporting more women IGAs with additional funds. More resources (X USD) will be allocated (additional funds based on gender results) to communes performing well in terms of gender IGAs. • Propose ways the project can assist not only groups of women, but also individual women who are engaged in agriculture/livestock production with business skills training and market access. • Pilot a system of rotating leadership among women in CIGs, with the aim of helping more women gain leadership and business management skills. • Compose the matching grant committee at the communal level of 40 percent women. • Include in the matching grant committee training a practical training on gender, gender in livestock, gender in agriculture and gender-based violence.
Component 2 – Inclusive commercial agriculture	
Sub-Component 2.1: Support to public investments for the implementation of selected ZOCAs.	• Involve women in the design and rule of use of infrastructures ZOCA infrastructures. • Increase outreach by extension services of women farmers by trying to hire and/or train women as extension agents for the project. Anticipate drafting specific guidelines for women taking into account illiteracy and their needs for specific technologies/practices. • Enable the development of small-scale, high-yielding, climate-smart, and nutrition-sensitive gardens equipped with micro-irrigation systems within each ZOCA. • Training on landscape approach include practical trainings on gender, gender in livestock, gender in agriculture and gender-based violence. • Provide tailored support to women producing seeds in terms of trainings and technologies.
Sub-Component 2.2: Support to smallholders associated to ZOCAs (Small Grant Program-SGP).	• Set quota of 50 percent women IGAs / window 1 (individuals and CIGs). • Set quota of 30 percent women Environmental Activities / window 2 (individuals and CIGs). • Set lower or minimal criteria for application for women or women groups for IGA/Envi. activities. • Pilot provision equipment for women CIGs under window A for the development of small-scale, high-yielding, climate-smart, and nutrition-sensitive gardens equipped with micro-irrigation systems. • Preparation of LUFs on ZOCA sites feasibility studies includes sensitization/training activities aimed at advancing women's equal tenure rights, and their equal access to and control over productive land, productive tools, and promoting access to extension, and financial services, education, training, markets, and information.
Component 3 - Project Management and Monitoring and Evaluation	
	• Develop a project gender strategy and an approach for the communication on the gender strategy (familiarization workshops for staff, trainings, etc.). • Consistently assess whether proposed project activities could heighten the risk of gender-based violence and develop strategies for addressing the issue. Include concrete gender actions in the PIM to thoroughly integrate gender into the guidance for implementation of components. • Develop the content for the project gender training for project staff and implementers at various levels to be specifically tailored to project activities.

ANNEX 5: Greenhouse Gas (GHG) Accounting

Methodology

1. To estimate the impact of agricultural investment lending on GHG emission and carbon sequestration, the WB has adopted the Ex-Ante Carbon-balance Tool (EX-ACT), developed by FAO. EX-ACT allows the assessment of a project's net carbon-balance, defined as the net balance of carbon dioxide (CO_2)-equivalent GHG emitted or sequestered resulting from project implementation compared to a 'without-project' scenario. EX-ACT estimates the carbon stock changes (emissions or sinks), expressed in equivalent tons of CO_2 per hectare and per year.

Project Boundary

2. The project will cover four wilaya in Mauritania. These represent the most productive area of the country's land area where livelihood can be sustained for livestock and dry crop farming and intensive production under irrigated conditions. The improved management of the landscape in the communes and around the water retentions is expected to lead to a slight increase in livestock numbers within project communes when compared to the without project situation. Project activities and scenarios 'with and without project' are summarized in Table A.5.1.

Table A.5.1 - Activities and expected GHG emission reductions and increased carbon sequestration for the direct impacts of the Mauritania Agriculture Development and Innovation Support Project

PROJECT Component	Activity	With Project Scenario	BAU Scenario[35]
Component 1.	**Land Use Change**	The project will intervene in 4 wilayas amounting to an administrative area of degraded grassland landscape interspersed with dryland crops. There will be natural regeneration and assisted regeneration in 1000 ha of land. These lands were initially degraded or set aside. In addition, some 3200-ha land will be used of vegetable garden and cropping areas. Regeneration will help soil moisture retention, nutrient run-off reduction and increase in yield. This will also help GHG emission reduction. IGAs will increase horticultural crops (vegetables) on household gardens. These areas would be cultivated with improved agronomic practices and residues would still be retained in the form of feed (mainly as fodder).	No land use change would occur on the degraded grassland.
Component 1	**Crop production (Annuals)**	The breakdown of these crops would be as follows: areas planted with millet would increase from 11060 ha to an estimated 20,000 ha; the sorghum area would increase from 66775 ha to an estimated 70,000 ha; while the area covered in maize would increase from 4,200 ha to some 6300 ha. All these crops would be cultivated with improved agronomic practices, water management, fertilizer management and residue exportation.	Annual crops including maize, sorghum, and millet would be cultivated without improved practices and residues exported.

[35] *Without the project scenario or baseline/ business-as-usual scenario, which corresponds to a description of expected conditions in the project boundaries in the absence of project activities.*

Component 1	**Livestock management**	The 4 wilayas are home to many animals. Since the project intervenes only on roughly a 1/10th of the area, the assumption was made that approximately 1/10 of the livestock population lives on the territory. Due to larger volumes of crop residues, improved grazing rotations and animal husbandry of sedentary livestock, the project will contribute to the growth of livestock in the following percentage relative to the natural growth of the number of animals: 4.3% for dairy cows, 3.6% for cattle generally, 4.1% for sheep and 4.2% for both goats and camels.	Herd size will remain growing at natural rate compared to the initial state. No improved feeding or husbandry practices will occur without the project.
Component 1	**Grasslands**	1,511,000 ha of moderately degraded grasslands remain degraded	2,100,000 ha of degraded grasslands remain degraded
Component 1	**Sustainable Land Management**	The project will invest in several SLM practices that will reduce GHG emission. These landscapes were initially moderately degraded. After taking interventions such as vegetable stripes, small earth dams, sand dunes fixation, tessa planting pit construction, the land degradation will be reduced and GHG emission is supposed to be mitigated. The total area of land under this intervention is supposed to be 1500 ha.	No land management practices were taken
Component 2	**Irrigation and Water Supply**	An additional 2,000 ha of project area will be under improved irrigation and water supply intervention	No additional improved irrigation and water supply intervention will occur
Component 3		The project will support component 1 and 2 with TA that will help in the application of the landscape approach in the communes supported under the project. These aspects are not expected to have a significant impact on GHG emissions.	

3. The carbon balance under this scenario is significant representing a reduction of some -1,987,792 tons of CO_2-equivalent relative to the without project option over a period of 15 years starting from project implementation. Per year, the mitigation potential is estimated at -132,519 tons of CO_2-eq, or -1.5 tons of CO_2-eq per hectare.

4. Through improved climate-smart practices and technologies, it is expected that the project will increase the intervention in the agriculture and livestock productivity and production, reduce the food and nutrition insecurity without any unfavorable effect on GHG emissions.

ANNEX 6: Summary of Adaptation and Mitigation Benefits under the Project

Sub-components and Activities	Climate Adaptation Benefits	Climate Mitigation Benefits
COMPONENT 1 – COMMUNITY-DRIVEN TERRITORIAL DEVELOPMENT AND PRESERVATION (US$17.5 MILLION)		
Sub-Component 1.1: Sub-watershed level landscape planning and restoration (US$9.8 million) *a) Preparation of SWS plans including* (i) inventorying and mapping the landscape components to be constructed, rehabilitated, and upgraded; (ii) establishing plans for environmental restoration and agriculture productivity enhancement; and (iii) developing social agreements for the future maintenance and use of restored landscapes. **(10% F)** *b) Investments of collective interest,* involving: (i) detailed technical studies associated with the restoration and enhancement of degraded landscapes to support adaptation planning and climate-risk management and carbon sequestration; and (ii) rehabilitation/ upgrading of the physical infrastructure to address climate vulnerabilities as identified and confirmed in the sub-watershed plans. **(70% F)** *c) Advisory support and provision of basic technical packages*. **(20% F)**	This subcomponent will support extensive technical assistance and significant investments in Sub-watershed level landscape planning and restoration, promotion and adoption of climate-resilient agricultural practices, and community-based participatory adaptation planning to reduce climate-exacerbated water stress and other vulnerabilities in Mauritania and the larger Sahel region. The preparation of plans will take place through collective action in consultation with grassroots stakeholders and through a participatory approach to build farmers' capacity in water use efficiency, water conservation, grassland cover (pasture production), cover crops and soil restoration, perennial cropping systems, cultivation of deep-rooted species, and tillage practices adapted to the type of soil to enhance climate resilience. Physical investments will focus on rehabilitating hydro-agricultural infrastructures, water harvesting, and water use efficiency, which will enhance drought adaptation capacity and climate resilience. The capacity support to extension and advisory services, among other things, will focus on (i) the production of extension material centered on the promotion of climate-smart crop practices adapted to the targeted areas; (ii) the delivery of extension activities (through farmer field schools-FFSs and use of ICTs) and services (including plant protection services) to enhance climate adaptation; and (iii) the provision of packages of climate-smart agricultural inputs including improved genetic material (drought-resistant seeds that are adapted to Mauritania's climatic conditions), and small equipment and tools to producers, all of which significantly contribute to climate adaptation.	Project activities under this subcomponent will contribute to climate mitigation through increased various soil management practices that avoid loss of soil carbon. Sub-watershed management plans, including rehabilitation and restoration of degraded land, erosion control, promotion of grassland cover (pasture production), cover crops and soil restoration, perennial cropping systems, cultivation of deep-rooted species, and tillage practices adapted to the type of soil all contribute to mitigation outcomes. Extension and advisory services promoting CSA practices will contribute to climate mitigation outcomes. Energy efficiency considerations within the projects proposed ICT investments and other farm equipment will contribute to climate mitigation outcomes.
Sub-Component 1.2: Augmenting and diversification of the local income base (US$4.2 million). *a) Outreach, awareness, and Business Plan (BP) development*. **(20% F)**	The grants that will be provided to IGA promoters under this subcomponent will focus primarily on the adoption of climate resilient practices, climate-smart machinery, milling equipment and storage facilities, access to water-efficient irrigation systems, improved soil and water management measures, and the use of climate-resilient inputs, all of which contribute significantly to climate adaptation.	In synergy with the activities of other Bank projects, the sub-component will enable the adoption of climate-smart practices related to animal health management for the benefit of livestock farmers who will be supported to reduce GHG emissions.

Sub-components and Activities	Climate Adaptation Benefits	Climate Mitigation Benefits
b) Provision of grants to co-finance collective IGA sub-projects (SPs), or to provide matching funds to existing local initiatives, with a focus on activities that enhance climate resilience capacity. **(80% F)**	The outreach, awareness and business plan development activity will include climate considerations, including climate risk management of IGAs across the criteria for grants in outreach, business plan development and awareness raising, and for grants specifically provided for climate to increase climate adaptation. Provision of grants will consist of eligibility criteria for prioritizing CSA practices and initiatives that address local climate vulnerabilities and strengthen resilience of beneficiaries, among others. Eligibility will also consider SPs that may incorporate potential investments in areas such as soil fertility management and afforestation/reforestation efforts. All these aspects will contribute to climate adaptation outcomes.	To enhance the sustainability of the activities financed under this component, the project will also work with microfinance institutions to develop specialized credit products that will be geared towards targeting climate mitigation actions/outcomes relevant to the value chains supported, investment in energy-efficient infrastructure, processing equipment and technology, water conservation systems and to support farmers and institutions on integrated landscape/resource management that increase carbon pools and significantly contribute to GHG mitigation. Eligibility criteria: This subcomponent will have eligibility criteria that will prioritize the provision of grants to sub-projects that may incorporate potential investments in areas such as soil fertility management and afforestation/ reforestation efforts, which will contribute to climate mitigation.
Sub-Component 1.3 - Institutional support to MoA's services and affiliated entities (US$3.5 million). *a) MoA's services:* (i) plan and implement climate-smart landscape interventions adapted to the rainfed context; and (ii) lay the groundwork for ZOCA development in collaboration with MoE, under Component 2. prioritize investments that will contribute energy efficiency. (40% F) *b) National Center for Agricultural Research and Development*: Financing under this sub-component will support the multiplication and provision of climate resilient crop varieties/improved seeds for rainfed crops through the CNRADA. (60% F)	The subcomponent will support the development of appropriate policies and coordination mechanisms between relevant government departments needed to build climate resilience using water-stress tolerant and resilient seeds and climate-smart production technologies. Activities under MoA services will focus on strengthening capacities to plan and implement climate-smart landscape interventions adapted to the rainfed context, including to prepare and respond to climate risks, training for climate adaptation and sequester carbon in the landscape; as well as to lay the groundwork for ZOCA development through supporting communities to get organized in cooperatives, or other forms of entrepreneurship to have better access to funding and facilitate land governance and titling. The delivery of technical and advisory services will be underpinned by a climate-smart extension service through provision of packages to SMAEs that reduce emission and contribute to climate mitigation. Support to the National Center for Agricultural Research and Development will finance: (i) studies and technical work for the review of the seed legislative and regulatory framework, including identifying entry points for climate-smart seed	Carbon sequestration through landscape interventions, climate change mitigation trainings, and research on organic fertilizers and hydroponics through the National Center for Agricultural Research and Development will contribute to climate mitigation. Technical assistance to public infrastructure will prioritize investments that will contribute to energy efficiency, and hence climate mitigation.

Sub-components and Activities	Climate Adaptation Benefits	Climate Mitigation Benefits
	policies and seed system development strategies; (ii) technical supervision of the process of multiplication and dissemination of climate resilient/improved seeds; and (iii) the investment and operating costs of local seed multiplication farms, including the supply of inputs and basic equipment. As applicable, climate resilient design standards and energy efficiency considerations will be taken into account for proposed investments on local seed multiplications farms and related inputs and equipment. All these aspects will contribute to climate adaptation.	
COMPONENT 2 – INCLUSIVE COMMERCIAL AGRICULTURE (US$27.5 MILLION)		
Sub-Component 2.1: Planning and implementation of ZOCA public investments (US$20.6 million). *Funding of the public infrastructure of the ZOCA sites*. SC 2.1 will also finance the construction of critical offsite infrastructure linking the ZOCA perimeter(s) to outside facilities, such as 'last mile' roads to the main highways and markets as well as utility connections**. (80% F)** SC 2.1 will also include financing for: (i) the initial preliminary studies required to assess the suitability of the potential ZOCA sites; (ii) the detailed technical studies for the selected ZOCA site(s); and (iii) the supervision of construction works and oversight of procurement of equipment. **(20% F)**	This subcomponent will finance *on-site climate resilient* infrastructure, *inter alia*[39]: (i) construction or upgrade of basic primary and secondary water-and energy efficient irrigation facilities (canals, irrigation hydrants, water retention works, etc.) to address climate-induced water scarcity, including the cost of critical equipment such as primary water pumping/ delivery equipment for on-farm production as required for total or partial irrigation control; and (ii) connection to the main power and potable water grid, and/or equipment for the provision of power and drinking water, respectively. The development of irrigation systems and climate resilient public infrastructure such as irrigation, pumping, potable water to address climate induced water scarcity will contribute to climate adaptation significantly. To mitigate the potential impacts of climate change, the project will ensure public infrastructure investments under this subcomponent are climate-proofed against the negative effects of flooding and drought, and other adverse climate impacts. In addition, private investors will be required to adopt climate-sensitive technologies.	Public infrastructure investments through this subcomponent such as irrigation and buildings will ensure inclusion of energy efficiency as one of the core criteria to enhance climate mitigation outcomes and reduce GHG emissions.

[39] *The detailed list of infrastructure to be financed will be the object of tripartite negotiations involving the Government, local communities, and external investors under the PPP agreements.*

Sub-components and Activities	Climate Adaptation Benefits	Climate Mitigation Benefits
Sub-Component 2.2: Support to small and medium agri-entrepreneurs (US$1.9 million) SC 2.2 will support a Small Grant Program (SGP) in the form of matching grants for eligible agricultural production and service activities to be developed within the ZOCA blocks. **(80% F)** It will also fund MoA's climate and agronomic advisory services to provide climate smart agriculture extension support to participating farmers/ entrepreneurs, including the delivery of training activities with content and approach tailored to their needs. **(20% F)**	The matching grants that will be provided through the SGP under this subcomponent will focus primarily on the adoption of climate resilient practices, (the selection criteria for SGP investments will include incorporation of climate smart practices and technologies). The agri-entrepreneurs benefiting from SGPs are expected to have experience or to be willing to adopt CSA production or climate-smart agri-business value chain activities which will contribute significantly to the climate adaptation. Through the support to agri-entrepeneurs for the development of climate smart farming enterprises, adoption of CSA practices, development of climate informed business plans, and MoA's climate and agronomic advisory services to provide climate smart agriculture extension support will contribute to improve climate adaptation and resilience of SMAEs.	The grants provided under this subcomponent will finance a package of investments, with a focus on developing innovative and climate-smart farming enterprises, adoption of CSA practices, and provision of investments for energy efficient irrigation systems and small farm production equipment, all of which will contribute to reducing GHG emissions and mitigation outcomes.
Sub-Component 2.3: Institutional support to MoE and other ZOCA implementing entities (US$4.9 million) ***Support to the MoE and other ZOCA implementing entities*** SC2.3 will provide targeted TA and capacity building support to MoE, and other implementing entities to plan and oversee the general deployment of the ZOCA program, provide the required training on climate awareness, climate risk management, and implementation modalities and assist the implementation of the selected pilot ZOCA block(s). This activity will support the MoE's General Directorate for PPPs, as well as the newly created Agency for Private Sector Promotion (APIM). **(50% F)**	This subcomponent will support institutional capacity of various stakeholders (government, communities, etc.) to ensure the proposed ZOCA approach will incorporate resilience measures to mitigate risks linked to climate change and its impacts. The expected investments on technologies and agroecological capacity building will enhance agricultural productivity while safeguarding environment and minimizing negative social impacts. It is expected that the capacity strengthening of these stakeholders would also be focused on the integration of climate risk management into land resources or ZOCA planning and development, as well as also making sure that those benefitting from the grant mechanisms incorporate climate related activities into their business plans. The sub-component will also support extension activities aiming at improving climate awareness and climate-related risks to strengthen the country's adaptation capacities. All these aspects will contribute to mainstreaming climate change into the planning and development of ZOCA, and thus climate adaptation significantly.	This subcomponent will support institutional capacity of stakeholders involved in planning and developing ZOCA to ensure that the proposed ZOCA planning and development is climate informed with adoption of CSA practices that will contribute to climate mitigation.

Sub-components and Activities	Climate Adaptation Benefits	Climate Mitigation Benefits
SC 2.3 will assist the territorial services of the Mauritanian administration and the local communities to (i) undertake the land rights inventories of the ZOCA blocks, including making a tally of all formal and customary rights; (ii) on that basis, prepare a land use framework for the ZOCA perimeters to determine cropping patterns and other land use; and (iii) identify the proportion of their own land which the communities choose to make available to private commercial agriculture producers, as part of ZOCA development. **(30% F)** SC 2.3 will provide specialized technical support for the above process to both assist local communities as the ZOCA program is rolled out, and, concomitantly, build the capacity of deconcentrated government services, including the territorial administration, to facilitate the process. The National Land Resources Committee will receive technical support under this activity. **(20% F).**		

ANNEX 7: Project Map