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PROGRAM APPRAISAL DOCUMENT

ON A

PROPOSED IDA SCALE UP FACILITY CREDIT

IN THE AMOUNT OF EUR137 MILLION

(US\$150 MILLION EQUIVALENT)

TO THE

REBUBLIC OF SENEGAL

FOR AN

AGRICULTURE AND LIVESTOCK COMPETITIVENESS PROGRAM FOR RESULTS

April 21, 2020

Agriculture Global Practice

Africa Region

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CURRENCY EQUIVALENTS

(Exchange Rate Effective as of March 31, 2020)

Currency Unit	=	CFAF
CFAF 585	=	US\$ 1.00
US\$ 1.00	=	EURO 0.9133

FISCAL YEAR

January 1 - December 31

ABBREVIATIONS AND ACRONYMS

AfDB	African Development Bank
ANCAR	<i>Agence Nationale de Conseil Agricole et Rural</i> (National Agricultural Advisory Agency)
ANIDA	<i>Agence Nationale d'Insertion et de Développement Agricole</i> (National Agricultural Insertion and Development Agency)
ARDs	<i>Agences Régionales de Développement</i> (Regional Development Agencies)
ARMP	<i>Autorité de Régulation des Marchés Publics</i> (Public Procurement Regulatory Authority)
B/C	Benefit Cost ratio
BA	<i>Banque Agricole</i> (Agriculture Bank)
BCEAO	<i>Banque Centrale des États de l'Afrique de l'Ouest</i> (Central Bank of West African States)
BOS	<i>Bureau Opérationnel de Suivi</i> (National Monitoring Bureau, Senegal Emerging Plan)
BP	Budget Program
CBPP	Contagious bovine pleuropneumonia
CEI	<i>Cellule d'Enquête et d'Inspection</i> (Investigation and Inspection Unit)
CEP	<i>Cellule des Etudes et de la Planification</i> (Studies and Planning Unit)
CERES	Centre Régional de Recherches en Ecotoxicologie et Sécurité Environnementale
CMP	<i>Code des Marchés Publics</i> (National Procurement Code)
CNAAS	<i>Compagnie Nationale d'Assurance Agricole</i> (National Agricultural Insurance Company)
CNAG	<i>Centre National d'Amélioration Génétique</i> (National Center for Genetic Improvement)
CNIA	<i>Comité National Interprofessionnel de l'Arachide</i> (National Interprofessional Groundnut Committee)
CNLCC	<i>Commission Nationale de Lutte contre la non Transparence, la Corruption et la Concussion</i> (Committee to Eliminate Non transparency, Corruption and Embezzlement)
COVID19	Corona Virus Disease
CPF	Country Partnership Framework
CPM	<i>Cellule de Passation des Marchés</i> (Procurement Unit)
CRASPs	<i>Comités Régionaux Agro-Sylvo-Pastoraux</i> (Regional Agro-Silvo-Pastoral Committees)
CRD	<i>Comité de Règlement des Différends</i> (Dispute Resolution Committee)
CRSE	<i>Comité Régional de Suivi Environnemental et Social</i> (Regional Committee for Environmental and Social Monitoring)
CSA	Climate-smart agriculture
CSOASP	<i>Conseil Supérieur d'Orientation Agro-Sylvo-Pastoral</i> (High-Level Agro-Silvo-Pastoral Advisory Council)
DAGE	<i>Direction de l'Administration Générale et de l'Équipement</i> (Department of General Administration and Equipment)
DAPSA	<i>Direction de l'Analyse, de la Prévision et des Statistiques Agricoles</i> (Department of Agricultural Analysis, Forecasting, and Statistics)
DBRLA	<i>Direction des Bassins de Rétention et des Lacs Artificiels</i> (Department of Retention Basins and Artificial Lakes)

DCMP	<i>Direction Centrale des Marchés Publics</i> (Central Public Procurement Department)
DEEC	<i>Direction de l'Environnement et des Etablissements Classés</i> (Department of Environment and Classified Establishments)
DEIE	<i>Division des Évaluations d'Impact Environnemental</i> (Department of Environmental Impact Assessment)
DFS	Decentralized Financial Services
DGA	<i>Direction Générale de l'Agriculture</i> (General Department of Agriculture) (MAER)
DIREL	<i>Direction de l'Elevage</i> (Livestock Department)
DISEM	<i>Direction des Semences</i> (Seed Department)
DLI	Disbursement-Linked Indicator
DPPD	<i>Document Pluri-Annuel de Programmation des Dépenses</i> (Medium Term Expenditure Framework)
DPV	<i>Direction de la Protection des Végétaux</i> (Department of Plant Protection)
DRDR	<i>Direction Régionale du Développement Rural</i> (Regional Department for Rural Development)
DREEC	<i>Division Régionale de l'Environnement et des Etablissements Classés</i> (Regional Departments of Environment and Classified Establishments)
DRP	<i>Demande de Renseignement de Prix</i> (Request for Price Information)
EIA	Environmental Impact Assessment
EMP	Environmental Management Plan
ERR	Economic Rate of Return
ESSA	Environmental and Social Systems Assessment
EU	European Union
FADSR	<i>Fond Agricole du Développement du Secteur Rural</i> (Rural Development Support Fund)
FAO	Food and Agriculture Organization
FCI	Finance, Competitiveness and Innovation (FCI) Global Practice-WBG
FFS	Farmers' Field School
FNDASP	<i>Fonds National de Développement Agro-Sylvo-Pastoral</i> (National Fund for Agro-Silvo-Pastoral Development)
FNRAA	<i>Fonds National de Recherches Agricoles et Agro-alimentaires</i> (National Fund for Agriculture and Agri-Food Research)
FONGIP	<i>Fond National de Garantie des Investissements Prioritaires</i> (National Guarantee Fund for Priority Investments)
FONSTAB	<i>Fonds d'Appui à la Stabulation</i> (Livestock Fund for Zero Grazing)
FY	Fiscal Year
GDP	Gross Domestic Product
GHG	Greenhouse Gas
GIIF	Global Index Insurance Facility
GoS	Government of Senegal
GP	Global Practice (World Bank)
GPS	Global Positioning System
GRS	Grievance Redress Service
ICT	Information and Communication Technology
IDA	International Development Association
IDB	Islamic Development Bank
IFAD	International Fund for Agricultural Development
IFC	International Finance Corporation
IFMIS	Integrated Financial Management Information System
IGE	<i>Inspection Générale d'Etat</i> (National Office of the Inspector General)
IMF	International Monetary Fund
INDC	Intended Nationally Determined Contribution
IPF	Investment Project Financing
IRR	Internal Rate of Return

ISRA	<i>Institut Sénégalais de Recherches Agronomiques</i> (Senegalese Institute for Agronomic Research)
IVA	Independent Verification Agent
KPI	Key Performance Indicator
LOASP	<i>Loi d'Orientation Agro-Sylvo-Pastorale</i> (Agro-Silvo-Pastoral Orientation Law)
LPDE	<i>Lettre de Politique de Développement de l'Elevage</i> (Livestock Development Policy)
LPSDA	<i>Lettre de Politique Sectorielle de Développement Agricole</i> (Agriculture Sector Development Policy)
M&E	Monitoring and Evaluation
MAER	<i>Ministère de l'Agriculture et de l'Équipement Rural</i> (Ministry of Agriculture and Rural Equipment)
MCPME	<i>Ministère du Commerce et des Petites et Moyennes Entreprises</i> (Ministry of Commerce and Small and Medium Enterprises)
MEDD/MESD	<i>Ministère de l'Environnement et du Développement Durable</i> (Ministry of Environment and Sustainable Development)
MEPA	<i>Ministère de l'Elevage et des Productions Animales</i> (Ministry of Livestock and Animal Production)
MEPC	<i>Ministère de l'Economie, du Plan et de la Coopération</i> (Ministry of the Economy, Planning, and Cooperation)
MFB	<i>Ministère des Finances et du Budget</i> (Ministry of Finance and Budget)
MFD	Mobilizing Finance for Development
MTR	Mid-Term Review
NACSP	National Advisory Committee on Seeds and Plants
NPV	Net Present Value
OECD	Organisation for Economic Co-operation and Development
OFNAC	<i>Office National de Lutte contre la Fraude et la Corruption</i> (National Office for Anticorruption and Fraud)
OHADA	<i>Organisation pour l'Harmonisation en Afrique du Droit des Affaires</i> (Organization for the Harmonization of Corporate Law in Africa)
OIE	World Organization of Animal Health
OPRC	Operational Procurement Review Committee
OPS	<i>Organisme Privé de Stockage</i> (Officially Licensed Traders)
ORSRE	<i>Organisme de Réglementation du Système des Reçus</i> (Warehouse Receipt Regulatory Organization)
PADAER	<i>Programme d'Appui au Développement Agricole et Entreprises Rurales</i> (Agriculture Development and Rural Enterprise Support Program)
PAFA-E	<i>Projet d'Appui aux Filières Agricoles</i> (Agriculture Value Chain Support Project, Extension Phase)
PAP	Program Action Plan
PAPIL	<i>Projet d'Appui à la Petite Irrigation Locale</i> (Small-Scale Local Irrigation Support Project)
PARFA	<i>Projet d'Appui à la Résilience des Filières Agricoles</i> (Agricultural Value Chain Resilience Support Project)
PDIDAS	<i>Projet de Développement Inclusif et Durable de l'Agribusiness au Sénégal</i> (Sustainable and Inclusive Agribusiness Project for Senegal)
PDMAS	<i>Programme de Développement des Marchés Agricoles du Sénégal</i> (Senegal Agricultural Markets and Agribusiness Development Project)
PDO	Project Development Objective
PforR	Program for Results
PNBSF	<i>Programme National de Bourses Sociales Familiales</i> (National Family Safety Net Program)
PNDE	<i>Plan National de Développement de l'Elevage</i> (National Livestock Development Plan)
PO	Producers' Organization
POM	Program Operational Manual
PPA	Project Preparation Advance
PPP	Public-Private Partnership
PPR	<i>Peste des Petits Ruminants</i> (small ruminant plague)

PRACAS	<i>Programme d'Accélération de la Cadence de l'Agriculture</i> (Program for Accelerated Pace of Agriculture)
PRAPS	<i>Projet Régional d'Appui au Pastoralisme au Sahel</i> (Regional Sahel Pastoralism Support Project)
PSE	<i>Plan Sénégal Émergent</i> (Emerging Senegal Program)
R&D	Research and development
RA	Results Area
RF	Results Framework
RNU	<i>Registre National Unique</i> (Single National Registry Center)
SAI	Supreme Audit Institution
SC	Steering Committee
SG	Office of the Secretary General
SIGFIP	<i>Système Intégré de Gestion des Finances Publiques</i> (Integrated Public Financial Management System)
SIIP	Sahel Irrigation Initiative Support Project
SME	Small and Medium Enterprises
SNCASP	<i>Système National de Conseil Agro-Sylvo-Pastoral</i> (National Agro-Silvo-Pastoral Advisory Body)
SO	Strategic Orientation
SONACOS	<i>Société Nationale de Commercialisation des Oléagineux</i> (National Oilseed Product Marketing Company)
SPC	Sub-Program Coordinator
SRA	Sub-Results Area
SRE	<i>Service Régional de l'Elevage</i> (Regional Livestock Service)
SUF	IDA18 Scale-Up Facility (World Bank)
SYGMAP	<i>Système Intégré de Gestion des Marchés Publics</i> (Integrated Public Procurement Management System)
TC	Technical Committee
TCT	Technical Coordination Team
TFP	Total Factor Productivity
ToR	Terms of Reference
TSA	Treasury Single Account
USAID	United States Agency for International Development
WAAPP	West Africa Agriculture Productivity Program
WAEMU	West Africa Economic and Monetary Union
WBG	World Bank Group
WRS	Warehouse Receipt System
XOF	Monetary Unit of the Central Bank of West African States

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DATA SHEET

DATASHEET

BASIC INFORMATION

Country(ies)	Project Name	
Senegal	AGRICULTURE AND LIVESTOCK COMPETITIVENESS PROGRAM FOR RESULTS	
Project ID	Financing Instrument	Does this operation have an IPF component?
P164967	Program-for-Results Financing	No

Financing & Implementation Modalities

<input type="checkbox"/> Multiphase Programmatic Approach (MPA)	<input type="checkbox"/> Fragile State(s)
<input type="checkbox"/> Contingent Emergency Response Component (CERC)	<input type="checkbox"/> Fragile within a non-fragile Country
<input type="checkbox"/> Small State(s)	<input type="checkbox"/> Conflict
<input type="checkbox"/> Alternate Procurement Arrangements (APA)	<input type="checkbox"/> Responding to Natural or Man-made Disaster

Expected Project Approval Date	Expected Closing Date
12-May-2020	31-Dec-2025
Bank/IFC Collaboration	Joint Level
Yes	Complementary or Interdependent project requiring active coordination

**Proposed Program Development Objective(s)**

The Program Development Objective is to enhance productivity and market access of priority commodity value chains and livestock, in the Extended Groundnut Basin and Agro-pastoral Areas.

Organizations

Borrower : Ministry of Finance and Budget

Implementing Agency : Ministry of Agriculture and Rural Equipment

Contact: Pape Malick NDAO

Title: Secretary General

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Implementing Agency : Ministry of Livestock and Animal Production

Contact: Mamadou Ousseynou SAKHO

Title: Secretary General

Telephone No: 221338260744

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COST & FINANCING**SUMMARY (USD Millions)**

Government program Cost	700.00
Total Operation Cost	210.00
Total Program Cost	210.00
Total Financing	210.00



Financing Gap	0.00
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Financing (USD Millions)

Counterpart Funding	60.00
Borrower/Recipient	50.00
Local Beneficiaries	10.00
International Development Association (IDA)	150.00
IDA Credit	150.00

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IDA Resources (in US\$, Millions)

	Credit Amount	Grant Amount	Total Amount
Senegal	150.00	0.00	150.00
Scale-up Facility (SUF)	150.00	0.00	150.00
Total	150.00	0.00	150.00

Expected Disbursements (USD Millions)

Fiscal Year	2020	2021	2022	2023	2024	2025	2026
Absolute	0.00	1.00	29.25	34.45	32.86	27.85	24.60
Cumulative	0.00	1.00	30.25	64.70	97.55	125.40	150.00

INSTITUTIONAL DATA

**Practice Area (Lead)**

Agriculture and Food

Contributing Practice AreasFinance, Competitiveness and Innovation, Transport,
Urban, Resilience and Land**Climate Change and Disaster Screening**

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

Gender Tag**Does the program plan to undertake any of the following?**

- | | |
|---|-----|
| a. Analysis to identify Project-relevant gaps between males and females, especially in light of country gaps identified through SCD and CPF | Yes |
| b. Specific action(s) to address the gender gaps identified in (a) and/or to improve women or men's empowerment | Yes |
| c. Include Indicators in results framework to monitor outcomes from actions identified in (b) | Yes |

SYSTEMATIC OPERATIONS RISK-RATING TOOL (SORT)

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



COMPLIANCE

Policy

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

[] Yes [✓] No

Does the program require any waivers of Bank policies?

[] Yes [✓] No

Legal Operational Policies

Triggered

Projects on International Waterways OP/BP 7.50

No

Projects in Disputed Areas OP/BP 7.60

No

Legal Covenants

Sections and Description

Schedule 2. Section I.A.2(a) (ii) The Recipient shall maintain or cause to be maintained at all times during Program implementation a Steering Committee, which shall be established not later than one (1) month after the Effective Date to oversee Program, provide strategic directions, and endorse Program reports, work plans and budgets, in a manner and with terms of reference acceptable to the Association.

Sections and Description

Schedule 2. Section I.A.2(c) (ii) The Recipient shall maintain or cause to be maintained at all times during Program implementation two (2) Technical Coordination Teams (“TCT”) hosted respectively within MAER and within MEPA, which shall be established not later than two (2) months after the Effective Date, in a manner and with terms of reference acceptable to the Association.

**Sections and Description**

Schedule 2. Section I.B.1(b) the Program Operations Manual ("POM") shall have been adopted by the Recipient not later than three (3) months after the Effective Date, in consultation and in a manner and substance satisfactory to the Association.

Sections and Description

Schedule 2. Section III.C.(1) The Recipient shall not later than three (3) months after the Effective Date, appoint and thereafter maintain at all times during the implementation of the Program, an independent Verification Agent under terms of reference acceptable to the Association.

Sections and Description

Schedule 2. Section V Not later than two (2) months after the Effective Date or at a later date agreed upon in writing the Association through an amendment to the Program Action Plan, the Recipient shall establish and thereafter maintain, throughout Program implementation, and publicize the availability of a grievance redress mechanism within each MAER and MEPA, in form and substance satisfactory to the Association.

Conditions

Type Disbursement	Description <p>Schedule 2. Section IV.B.1 No withdrawal shall be made:</p> <p>(a) on the basis of DLRs achieved prior to the Signature Date; or</p> <p>(b) for any DLR under Category (1) through (10), until and unless the Recipient has furnished evidence satisfactory to the Association that said DLR has been achieved.</p>
Type Disbursement	Description <p>Schedule 2. Section IV.B.2 The Recipient may withdraw an amount not to exceed thirty four million two hundred and fifty thousand Euros (EUR 34,250,000) as an advance, provided, however, that if the DLRs in the opinion of the Association, are not achieved (or only partially achieved) by the Closing Date, the Recipient shall refund such advance to the Association promptly upon notice thereof by the Association. Except as otherwise agreed with the Recipient, the Association shall cancel the amount so refunded. Any further withdrawals requested as an advance under any Category shall be permitted only on such terms and</p>



conditions as the Association shall specify by notice to the Recipient

Type	Description
Disbursement	Schedule 2. Section IV.B.3 If any of the DLRs under Category (1) through (10) has not been achieved, the Association may, at any time, by notice to the Recipient decide in its own discretion to: (a) authorize the withdrawal of such lesser amount of the unwithdrawn proceeds of the Credit then allocated to said Category which, in the opinion of the Association, corresponds to the extent of achievement of said DLR, said lesser amount to be calculated in accordance with the formula set out for scalable DLRs under Section IV.A.2. of this Part B; (b) reallocate all or a portion of the proceeds of the Credit then allocated to said DLR to any other DLR; or (c) cancel all or a portion of the proceeds of the Credit then allocated to said DLR.



I. STRATEGIC CONTEXT

A. COUNTRY CONTEXT

1. **Senegal is entering the third decade of the 21st century with tremendous promises and opportunities, while facing significant pressures to navigate growing risks and overcome deeply rooted challenges.** Structural reforms and favorable exogenous conditions have led to Gross Domestic Product (GDP) growth of above 6 percent for the last five years. Offshore oil and gas discoveries will reach production in 2022–23, easing some of the country’s fiscal and development challenges and laying a foundation for broad-based economic growth. A vibrant democracy has provided the current government with a second mandate, and an ambitious national development plan that provides a roadmap to middle-income status. Yet Senegal faces important challenges in maintaining its trajectory toward emergence, including reducing challenges in the different forms of inequality, strengthening governance and human capital, efficiently mobilizing tax revenue, transitioning to more private sector-led growth, and managing the increasing risks from climate change. Public policies will also need to promote remunerative employment for the ever-expanding youth population.
2. **Faster economic growth has reduced the incidence of poverty, but rural areas still lag behind their urban counterparts.** The share of people living in poverty (income per capita below US\$1.9 per day) fell from 47 percent in 2011 to 38 percent in 2018. Agriculture development was a key driver behind this reduction. The sector’s performance has improved significantly, with two exceptionally good years (2017 and 2018) registering year-on-year growth of 13 percent and 7 percent, respectively. Improvements in value added per agricultural worker, although moderate, reversed a negative trend lasting more than a decade, pointing to signs of nascent structural transformation. Another sign is the emerging trend of job reallocation out of the primary sector as rural households tap into the growing rural non-farm economy for their livelihoods. At the same time, growth in labor-intensive sectors such as construction has boosted income among the urban poor.
3. **The Government of Senegal (GoS) aims to achieve middle-income status by 2035.** “Plan Senegal Emergent” (PSE) is the blueprint for achieving that goal. Its strategic objectives are to: (i) stimulate structural transformation of the economy to support sustainable and dynamic growth, (ii) facilitate broad access to social services while preserving conditions for sustainable development, and (iii) meet requirements for good governance by strengthening the country’s institutions and promoting peace, security, and regional integration. The proposed Program for Results (PforR) helps implement the PSE through its focus on promoting more competitive agricultural and livestock value chains for resilient and inclusive growth.
4. **COVID-19 is expected to have substantial negative impact on Senegal’s economy.** The COVID-19 pandemic is primarily a health crisis and a human tragedy, but it also has far-reaching economic ramifications. In Africa, it is already disrupting millions of people’s livelihoods, with disproportionate impact on poor households and small and informal businesses—and the pace of this disruption is likely to accelerate in the weeks ahead. No country or community is exempt; in oil-exporting countries, COVID-related challenges are compounded by the collapse of the oil price. Senegal will be impacted through external and domestic transmission channels, with growth projected to slow significantly while increasing



and unexpected financing needs will need to be met. Despite favorable terms of trade, global supply chain disruptions and weak demand in key trading partner economies will subdue import driven investment and (agricultural) export growth. With tourism and transport being heavily constrained, service exports and overall sector growth will suffer, potentially leading to increasing poverty. Moreover, domestic consumption will further decline due to lower remittance flows from Europe. Following the government's attempt to mitigate the effects of the crisis, the overall fiscal deficit will significantly increase in 2020 and a substantial financing gap will have to be closed.

5. **The GoS has developed a comprehensive National COVID-19 Response Plan, which is aligned with the World Health Organization's Strategic Preparedness and Response Plan.** The Plan focuses on scaling-up and strengthening the Government's capacity to respond to the COVID-19 outbreak. The National Epidemics Management Committee will oversee the overall coordination and implementation of the Plan. The Government has requested financial and technical support to help assure appropriate and timely implementation of key activities under this Plan, the provision of specific supplies and logistical support for the health system to contain the pandemic, as well as mitigation of its effects, including appropriate treatment to minimize morbidity and mortality. In this context, the World Bank has approved on April 2, 2020 a financing of US\$20 million to support the Senegal COVID-19 Response Project (P173838). The proposed Program supports activities that are pertinent in the context of the current pandemic crisis and the need to increase domestic food production, create jobs in rural areas, and improve overall country food security. Given the measures being implemented by the Government to contain this outbreak and the nature of the activities planned under the Program, the outbreak is not expected to have significant impact on its implementation.

B. SECTORAL AND INSTITUTIONAL CONTEXT

6. **Agriculture has grown at a robust rate of 3.2 percent in the past two decades.** Under the Program for Accelerated Pace for Agriculture (PRACAS) and the National Livestock Development Plan (PNDE)¹, crop and livestock production have grown at robust rates in recent years (Box 1). The development of sedentary mixed crop-livestock production systems has diversified revenues and provided a critical asset and safety net for farmers. This progress occurred through a combination of financial and pricing incentives (subsidized inputs – seeds, fertilizer and farm equipment, and interest rates, as well as crop price setting) and production enhancement measures (technology development and transfer). In addition, efforts have been made to expand agriculture credit and provide subsidies to agriculture insurance to facilitate access to finance. Rural people, who constitute 62 percent of the population, have benefited significantly from this progress, given that agriculture is a source of employment for 69 percent of the rural population and 36 percent of the national labor force². Many agricultural jobs are not very remunerative, however, and the incidence of poverty among farmers and herders is the highest among any group in the country. In rural areas, nearly 80 percent of workers in paid employment are in the bottom income quintile, and even the more prosperous individuals engage largely in providing poorly paid

¹ Programme d'Accélération de la Cadence de l'Agriculture Sénégalaise (PRACAS) concluded its first phase (2014–17) and a second is underway (2018–23); the Plan National de Développement de l'Elevage-(PNDE, 2014–17) will also extend to 2023.

² ILO Labor Force Survey (2015) and <https://gfc.ucdavis.edu/profiles/rst/sen.html>.



informal services. Among the poorest are the farmers growing rainfed crops and herders having only livestock as their main livelihood source.

7. **Despite the recent progress, the productivity gap between agriculture and the rest of the economy remains large and closing the gap will require government support policies to change.** The average farmer or herder is more than six times less productive on average than their counterparts in other sectors. Low agricultural productivity has many causes: only 3 percent of cultivated land is irrigated; the production system is still archaic; harvest losses span between 10 percent and 30 percent; and sustainable access to productive assets is problematic. In this context, increased agricultural output over the last few years has stemmed more from the expansion of cultivated area and increases in input use, rather than from overall improvements in Total Factor Productivity (TFP) through such factors as innovation and skills. Furthermore, adverse weather events, including drought and floods, as well as land degradation adds to the challenge to realize the full potential of agriculture capacities of the country. To drive the economic transformation agenda described in the PSE and achieve substantial, sustained poverty reduction, Senegal must significantly improve TFP and labor productivity. A three-pronged approach is proposed to reduce the productivity gap and increase incomes of farmers and herders: (i) improving the productivity incentive framework, focusing on subsidies, pricing, and marketing policies to provide a conducive policy environment to support rural productivity; (ii) reorienting government spending to emphasize the production of public goods and services such as research and extension, seed production, and rural infrastructure to enhance knowledge dissemination, technology adoption and trade; and (iii) promoting increased roles for non-public actors and supporting partnerships between them and state institutions to promote financial inclusion and risk protection as well as equal access to knowledge, market and inputs.

Box 1: Recent evolution of agricultural production

Crops. Rice—record production of paddy estimated at 1.13 million tons in 2017, double the 2014 level; groundnuts—1.4 million tons in 2017, also double the 2014 level; onions—production increased by 90 percent over 2014–17, to about 400,000 tons; potatoes—close to an eightfold increase, from 15,000 tons to almost 120,000 tons.

Livestock. During 2000–15, the number of *bovines* increased by 17 percent and *sheep and goats* by 42 percent; chicken numbers grew six-fold. *Source: MAER and MEPA databases.*

8. **Senegalese agriculture is vulnerable to climate shocks, with drought being the most critical risk in terms of frequency and impact.** The strong correlation between changes in agriculture's contribution to GDP and meteorological conditions demonstrates agriculture's sensitivity to weather-related events. Risks stemming from climate change are higher in agriculture than in any other sectors of the economy. The food crisis resulting from the 2011 drought affected a sizable share of the population. Average rainfall has decreased by about 30 percent since 1950 with increasing variability between years, causing severe droughts and inundations, while the average annual temperature has increased by 1.6°C. While longer-term climate change projections remain uncertain, short- and medium-term rainfall deficits are very likely to continue to plague agriculture (crops and livestock) in Senegal, as the frequency and severity of drought will probably either remain the same or increase. Senegal's Intended Nationally Determined Contribution (INDC, 2015) considers adaptation options to be a top priority, including options that reinforce the rural



population's resilience to increasingly unpredictable weather patterns. The nation's climate change strategy is based on a vision of climate-smart agriculture (CSA) and access to modern energy-saving technology for everyone. In particular, Senegal seeks good adaptation practices and techniques that combine improved productivity and increased reserve stocks in communities to reduce food insecurity, and permit carbon sequestration and a reduction in greenhouse gas (GHG) emissions. The proposed Program emphasizes support for CSA and other sustainable agricultural intensification and diversification practices and integrated natural resource management. While adaptation strategies are usually long-term in nature to harvest their full benefits, risk mitigation such as ex ante climate risk solutions (e.g. agriculture insurance) can help rural households stabilize their income and break the cycle of poverty in times of adverse weather events such as drought.

9. The government's subsidy policy has distorted competition and had a disproportional impact on agricultural value added. Farm subsidies cost a significant fraction of GDP (0.5 percent in 2018) but have not given results commensurate with their cost. These subsidies must be allocated more cost-efficiently, including through more effective targeting mechanisms that ensure access by poor farmers and herders. Government regulations and policy interventions have much reduced the space for fair and open competition, promoted rent-seeking behavior, and brought about inefficient and inappropriate allocations of public resources. Free primary marketing is impeded by the current provisions and related regulations for transport, quality control, and competition between operators involved in the financing, crop insurance, collection and processing of groundnuts. The subsidy for companies that process groundnut oil prevents production from being allocated efficiently, to the detriment of the much more remunerative market for whole nuts. The system for setting the producer price for groundnuts currently uses the world market price for groundnut oil as the reference price. To better guide production trends, this system must be reevaluated with a view to basing the reference price predominantly on the price for whole nuts. The National Groundnut Interprofessional Committee (CNIA), which was intended to play a key role in promoting and managing the groundnut value chain, has remained very ineffective, undermined by institutional and organizational weaknesses. Given the new dynamics in the value chain and the development prospects emerging from expanding market opportunities, the CNIA must be restructured to become a much stronger institution, both in terms of its legitimacy and managerial capacity.

10. The productivity gap can be narrowed by addressing constraints that prevent efficient input use and access to advisory services. First, certified seed production and distribution systems can be improved, including through partnerships between public institutions such as the Senegalese Institute for Agriculture Research (ISRA), farmer cooperatives, and other seed industry actors. Second, fertilizer use must increase, based on updated fertilizer formulations and recommendations tailored to local agroecological conditions. Third, producers must have access to advisory services of good quality. Finally, any effort to reduce the productivity gap must be accompanied by efforts to resolve environmental problems such as the loss of soil fertility. Given these considerations, the national program should reorient its efforts to focus on productivity-enhancing activities, including wide dissemination of crop diversification and agroforestry techniques; water collection and storage strategies such as dams, retention basins, structures to prevent soil salinity, and windbreaks; expansion of community woodlots; prevention of bush fires;



dissemination of organic soil fertility techniques; early warning systems in rural areas; and the prevention and treatment of pest infestations. The proposed Program will include policy reforms to rationalize agricultural subsidies and prices as well as productivity-enhancing measures that require government support, such as improved seed production, crop marketing and food safety regulations, and livestock disease control interventions.

11. To increase agricultural productivity, there is a need to redefine the public sector's role and responsibilities and tap into the private sector strategy. For example, the public sector has not been effective in seed production, quality control, and certification, or in research and development (R&D) to improve husbandry practices and generate productivity-enhancing cultivars. This ineffectiveness stems partly from the overlapping and/or ambiguous roles played by public and non-public actors, both across and within main value chains, in activities ranging from producer price setting to foundation seed production and primary marketing. For groundnuts, for instance, processing plants purchase the crop through Officially Licensed Traders (OPSSs) at the subsidized producer price, while exporters of whole nuts must purchase the crop at the market-determined price. To improve the performance of important tasks in agriculture such as foundation seed production, the government can tap into private sector capacity through public-private partnerships (PPPs), such as those already initiated in the groundnut value chain. For such partnerships to be effective, the government will need to develop appropriate regulations that will facilitate investments, in addition to supporting contractual arrangements between producer organizations (POs) and private actors such as processing firms, traders, and exporters. The Program will address both the ambiguity in roles and responsibilities and stronger partnerships with the private sector through the World Bank Group (WBG) Mobilizing Finance for Development (MFD) approach. Similarly, to relieve the burden on public resources, agriculture risks can be transferred to a wide spectrum of risk carriers, crowding in private-sector stakeholders. Successful PPP in risk transfer can effectively de-risk smallholder farmers so that they free up assets otherwise held back as reserves, allowing them to invest more in economic activities and eventually increasing productivity and income.

12. Despite government support, the productivity of many Senegalese agriculture producers is still limited by two major constraints: they cannot obtain credit to invest in more productive operations or purchase crop insurance to manage risk and protect their investments. While 46 percent of rural adults borrowed money in 2017, only 5.7 percent borrowed from a formal financial institution³. The key constraints to lending for agricultural activities are well known: it is costly and risky to lend to farmers involved in rainfed agriculture, financial institutions lack knowledge of agriculture finance, microfinance institutions have exhibited weak performance and governance issues, and public interventions have been inefficient (involving crowding out effects). The GoS subsidizes loans issued to smallholders (with little evidence on efficient targeting) by covering the difference between market interest rates (about 13 percent) and the capped interest rate for farmers (7.5 percent). The subsidy is administered by State-owned *Banque Agricole* (BA). Repeated decisions by the Government to cancel farmers' debts has jeopardized the soundness of BA, which does not always receive committed funds and prompt regular capital increases. The Government also supports access to agricultural insurance through the *Compagnie Nationale d'Assurance Agricole du Sénégal* (CNAAS) under a 50 percent subsidy on premiums. But wide

³ Global Findex Database (2017).



access to suitable agricultural insurance products remains constrained for several reasons: reliable, granular data on weather and yields are limited, the current insurance products are expensive, producers have limited financial awareness and understanding of insurance (including the basis risk arising when farmers experience a shock but receive no payout). Also, there is a need to promote value-chain type of financing in the form of warehouse receipts, which requires the operationalization of the new law on Warehouse Receipt Systems (WRS). The proposed Program will address these constraints through close collaboration between the World Bank and International Finance Corporation (IFC) and other partners.

13. Mixed crop-livestock and peri-urban livestock production systems are on an upward trend fueled by growing national demand, but the productivity gap remains large. The livestock sector is estimated to contribute to at least 30 percent of the agriculture GDP. It provides livelihoods to a large fraction of the rural population and plays a critical role in women and children's nutritional security. However, the sector's public funding has consistently been inadequate (e.g. 6.8 percent of the overall agriculture sector funding between 2011-2015). This lack of financing has resulted in a limited capacity from the Government to provide essential services to producers and to create an enabling environment to support the sustainable development and modernization of the sector as laid out in the strategic documents – PRACAS II and PNDE. Low levels of public investments have left the sector with important gaps in animal nutrition, genetics, health, and husbandry practices constraining its sustainable growth, adapted to and taking advantage of the countries diverse agro-ecological conditions. Major constraints to livestock productivity include the presence of highly contagious diseases, insufficient access to quality forage and feed, and a lack of knowledge and capacity from stakeholders involved in the sector. Value chains are also poorly developed owing to the limited organization of herders, as well as the lack of infrastructure and equipment, and an insufficient integration between the various segments of the value chains. Furthermore, MEPA lacks solid regulations and strategies to address in the most efficient way the critical challenges faced by the sector considering the limited resources allocated, as well as minimal equipment and infrastructure to carry out its core mandate. Hence the Program for Results (PforR) will focus on several of these constraints and pave the way for the sector's greater integration in the country's socio-economic development and resilience agendas.

14. **Productivity also suffers as women are marginalized in agricultural activities.** Overall while women make important contributions to the agriculture sector, they still earn less. As presented in the Country Partnership Framework (CPF) (and several World Bank Gender studies⁴) despite the fact that women are estimated to represent more than half of those economically active, the potential of the agriculture sector to help rural women out of poverty is hampered by their poor access to productive resources (inputs, land, credit), that results in men dominating the more profitable activities. Other factors also undermine women's participation in agriculture in Senegal, including low human capital (inadequate technical education) and limited access to markets. Access to credit tends to also be more limited among women. The access rates to Decentralized Financial Services (DFSs) in the banking system is estimated at

⁴ 2015 Poverty and Gender Assessment (which covers gender in terms of employment, education, poverty, access to finance, health, and agriculture); 2017 West Africa Poverty Monitoring ASA (including two reports on constraints to women's economic participation in Senegal); the 2018 study on Women, business, and the law



8 percent for men and 2 percent for women, and 9.9 percent for men and 6.6 percent for women in the non-banking system (informal sector).

15. Similarly, many rural youths have had little formal education, and most lack professional qualifications. On top of their lack of education and experience, their low social status limits their participation in decision-making at the family and community level and makes it harder to take advantage of economic opportunities. A study by the International Monetary Fund (IMF) revealed that under the most optimistic policy scenarios, 75 percent of African youth will have to make their own jobs in agriculture and household enterprises⁵. The proposed Program will promote diversification into higher-value agriculture (through horticultural crops, for instance) and the use of digital or mechanized approaches for agricultural enterprises, among other activities. The goal is to attract/retain youth and entrepreneurs to the agriculture sector by modernizing agriculture through technology.

16. **Achieving a sustained rise in agricultural production and productivity will also require a spectrum of new, integrative technologies and knowledge that facilitate better connections between agriculture and other sectors of the economy and that seamlessly link technology to increased agricultural productivity with technology also being used to manage risks.** Agriculture should be better integrated with other sectors of the economy, starting with the local food transformation industry, which frequently uses imported rather than locally produced inputs and lacks modern processing technologies to meet market demand. Senegal can shield producers from the effects of volatile climatic conditions by developing technologies that improve risk management, such as irrigation systems to improve water control and enable producers to move gradually away from rainfed agriculture; developing climate-smart technologies such as high-yielding, drought-tolerant and early maturing varieties, CSA practices tailored to local agro-ecological conditions and integrated land/soil fertility and pest management; on-farm digital technologies supporting improved agro-climatic services and weather forecasting; and infrastructure for the livestock sector and enhanced animal husbandry practices. Because knowledge is essential for reinforcing the technical capacity of small-scale producers, including their knowledge of digital solutions that boost productivity and resilience, research centers and agricultural advisory services must collaborate much more closely to facilitate knowledge transfer. The reliability of agricultural statistics can be improved by relying more on new information and communication technologies (ICTs) such as global positioning systems (GPS) and drones, adequate estimation methodologies, and improved weather forecasts. Finally, it is critical to encourage the private sector to play a bigger role in the development of agriculture.

17. **The proposed Program for Results (PforR) will support transformative elements to remove the above constraints, as reflected in PRACAS II and PNDE.** Two strategic entry points for attacking low productivity in Senegal's agriculture sector and improving the welfare of poor rural households as part of the PforR are (i) the groundnut-based systems, and (ii) livestock systems. As a first entry point, the Program will support improvements in the productivity and economic performance of the groundnut value chain in the country's extended groundnut basin. The groundnut value chain is of major economic, social and political importance in Senegal. Groundnut production remains a primary source of income for most farm families, accounting for about half of the cropped area in Senegal and employing two-thirds of

⁵ IMF (2013): *Africa's Got Work to Do: Employment Prospects in the New Century*



the rural population, mostly living below the official poverty line. Aligned with supporting the groundnut systems, the proposed Program will promote crop diversification and build producers' resilience to climate change by increasing the productivity of other priority crops associated with the groundnut-based systems (such as maize, potatoes, sesame, *fonio*, and horticultural crops). As a second thrust, the Program will support the development of selected livestock value chains in agro-pastoral areas, with a focus on dairy production and small ruminants, both socially and economically critical to rural livelihoods, especially the most vulnerable (poorest producers and women). Given the anticipated improvement in productivity of the groundnut- and livestock-based systems, the PforR is expected to have a major socio-economic impact in the country.

C. RELATIONSHIP TO THE CPF

18. **The Program for Results aligns fully with the Country Partnership Framework (CPF) Fiscal Year (FY) 2020–24 (Report No. 143333-SN).** By helping to integrate small-scale producers and herders into more productive and resilient crop and livestock value chains—focusing on the groundnut value chain, crop diversification, and key livestock enterprises—the Program directly supports CPF Focus Area 2 (*Boost competitiveness and job creation through private sector-led growth*), particularly Objective 2.4 (*Boost competitiveness of agriculture and livestock and related value chains*), and Objective 3.1 (*Promote and protect resilient likelihood, ecosystems, and infrastructures in the face of climate change*). To that end, the Program supports efforts that include (among others): (i) building the institutional capacity to deliver the public services required to enhance agricultural competitiveness, such as basic seed production or animal vaccination campaigns; (ii) disseminating CSA practices to preserve soil fertility and reduce water use; and (iii) mainstreaming the use of results-based financing to improve budget planning, management, and disbursement of government and donor resources. Reflecting the WBG's MFD approach, to the extent possible, the Program will draw upon private investors to participate in these development efforts through appropriate contractual arrangements with producers. The Program will also work with the government to disengage from unsustainable price setting, quota, and subsidy policies.

D. RATIONALE FOR BANK ENGAGEMENT AND CHOICE OF FINANCING INSTRUMENT

19. **The World Bank has supported implementation of PRACAS and PNDE since their inception, most notably through a series of investment operations, and the proposed Program is designed to build on their achievements.** The operations have included the Senegal Sustainable and Inclusive Agribusiness Project (P124018, 2014–20, US\$80 million, ongoing), the Regional Sahel Pastoralism Support Project (P147674, 2018–23, US\$30.5 million, ongoing), the West Africa Agricultural Productivity Program (P129565, 2007–18, US\$80 million, closed) and the Agricultural Markets and Agribusiness Development Project (PDMAS, P083609, US\$74 million, closed). They have been instrumental in enhancing agricultural productivity, developing inclusive commercial agriculture, and implementing more sustainable land management in project areas; improving access to essential productive assets, services, and markets for pastoralists and agro-pastoralists; and boosting technology and innovation in the agricultural sector. Sustainability concerns in agriculture have also been addressed through a grant from the Global Environmental Facility for the Community-based Sustainable Land Management Project (P130271, 2014–20, US\$6 million, ongoing), which focused on climate change adaptation and land



conservation. The proposed Program seeks to build on the achievements of these operations through: (i) activities to enhance on-farm productivity (such as promoting CSA, crop diversification, and greater private sector participation in agribusiness); (ii) the accelerated implementation of agricultural reforms identified as priorities in PRACAS and PNDE (such as the use and efficiency of subsidies); and (iii) a stronger focus on results.

20. **A Program-for-Results instrument is best suited to support the implementation of policy reforms and investments under the second phase of the PRACAS II and PNDE, with a special focus on the groundnut and livestock value chains.** This instrument will ensure full ownership by the government while guaranteeing alignment with national and sector strategic development frameworks. Because the PforR flexibly links disbursement to key sequenced program results, it is particularly appropriate for incentivizing the participating ministries—the Ministry of Agriculture and Rural Equipment (MAER) and Ministry of Livestock and Animal Production (MEPA)—to improve the planning and delivery of activities deemed essential for achieving the overarching results sought by PRACAS and PNDE. This outcome orientation is combined with support to build sustainable institutional capacity in the participating ministries for program planning, budgeting, implementation, and reporting, which will strengthen the governance systems of both ministries, especially with respect to efficiency and accountability in the use of public resources.

21. **The proposed Program meets the criteria for funding eligibility under the Scale-Up Facility (SUF).** The use of the SUF is justified by the fact that the proposed PforR aims to achieve significant transformational impacts benefiting Senegal's most vulnerable populations. More specifically, the proposed Program will generate additional revenues for small-scale producers and small and medium enterprises (SMEs) along the groundnut and livestock value chains, broaden the government's fiscal space by gradually lifting subsidies that have little impact, and crowd in private investment while reducing concessional funding to the private sector. The project will also foster regional integration as program interventions are expected to boost trade with neighboring countries. At the same time, the PforR addresses the cross-cutting priorities of gender and youth (by supporting greater access to more diversified economic activities) and climate change and resilient production systems (in accordance with Senegal INDC priorities). The low risk related to Senegal's debt distress status further strengthens its eligibility for IDA18 Scale-up Facility (SUF) financing.

II. PROGRAM DESCRIPTION

A. GOVERNMENT PROGRAM

22. **The Program will support activities and reforms embedded in two national programs, PRACAS and PNDE to promote sustainable, resilient, and inclusive growth as laid out in the PSE.** The PforR crop development subprogram will support PRACAS II, with responsibility entrusted to MAER; the PforR livestock development subprogram will support PNDE, with responsibility vested with MEPA.

23. **The first phase of PRACAS (2014–17) led to significant improvements in agricultural output, but sustained growth in overall agricultural productivity is needed to drive inclusive economic transformation in Senegal.** Rice and groundnuts were the priority value chains targeted under PRACAS I. Strong government support for rice cultivation over the last several years (the expansion of irrigated



systems, reforms in irrigation management, and the expansion of lowland and rainfed rice cultivation) has been paying off. Yields of rice increased significantly, surpassing the African average and closing the gap with the world average. Groundnut production also trended upward under government support for aggressive seed and fertilizer subsidies, the expansion of agricultural mechanization, and credit and insurance for farmers. Owing to these measures, along with good rainfall, government performance targets were generally met or exceeded. By 2016, production of certified groundnut seed reached 55,000 metric tons (mt) against a target of 40,000 mt, and in 2017, groundnut production reached 1,050,000 mt against a target of 1,000,000 mt. An important consideration, however, is that the increase in agricultural output over the last few years (including groundnuts) stemmed more from an expansion of cultivated area and input use than from an overall improvement in TFP predicated on innovation and skills. To drive the economic transformation agenda in the PSE and achieve sustained poverty reduction, TFP, including labor productivity, must improve significantly. In addition, to mitigating adverse effects on agricultural production from climate change, risk reduction (e.g. CSA and agriculture insurance) needs to go hand in hand for long term value creation.

24. The development objectives of PRACAS II are to enhance food security and nutrition and increase rural incomes through support to food production and export crops. PRACAS II pursues the guiding strategy for crop development initiated by MAER under PRACAS I, with a focus on scaling up production targets for the main agricultural value chains. Related policy reforms and priority investments under PRACAS II seek to create employment, expand exports, promote Senegal's integration into the global economy, and help agriculture adapt to climate change. To reinforce those efforts, PRACAS II aims to strengthen government institutions and make the regulatory framework more transparent and conducive to incentivizing agricultural production. The Agriculture Sector Development Policy (LPSDA) presents the short-term action plan to achieve PRACAS II objectives which has twelve Strategic Orientations (SOs):

- (a) *SO1 and SO2 pertain to seed production:* The certified seed production system will be strengthened by establishing an efficient mechanism for quality control in seed production and supporting the emergence of cooperatives and private enterprises engaged in seed multiplication and distribution, through contracts between ISRA and private operators;
- (b) *SO3 and SO4 relate to the promotion of fertilizer use and mechanization:* The government's objective is to partially subsidize 50,000–80,000 mt of fertilizer yearly and remove the value-added and import taxes on mechanical equipment. Other measures include support for credit and leasing facilities to obtain equipment, as well as spare parts and training for equipment operation and maintenance;
- (c) *SO5 relates to irrigation development,* with targets of 50,000 ha of irrigated rice production, 10,000 ha of irrigated fruit and vegetable production for export, and 8,000 ha under irrigation for multi-crop purposes;
- (d) *SO6 focuses on agricultural research, extension, and training* through stronger partnerships between public institutions and farmer organizations;
- (e) *SO7 relates to support to sector institutions,* including MAER and affiliated entities, and inter-professions;



- (f) *SO8 facilitates access to financing* by operationalizing several instruments such as the Fund for National Agro-Sylvo-Pastoral Development (FNDASP) and the Rural Development Support Fund (FADSR);
- (g) *SO9 relates to value addition and access to markets*, with the construction and/or rehabilitation of rural feeder roads (400 km) and storage/market facilities, as well as support to artisanal and industrial processing and the promotion of corresponding contractual arrangements along the value chain;
- (h) *SO10 promotes export quality control*, including development of the regulatory framework for quality certification and adherence to sanitary and phytosanitary standards;
- (i) *SO11 concerns environmental management*, including CSA and mitigation of land degradation through the dissemination of appropriate technologies and best practices; and
- (j) *SO12 relates to the reform of subsidy policies*, with the objective of reducing the overall fiscal burden of subsidies from 0.5 percent to 0.3 percent of GDP.

25. **The PNDE, which is based on the Pastoral Code (2013) was adjusted in 2017 and lays out a 15-year vision to guide livestock activities.** The PNDE development objective is to make livestock a high performing sector, able to meet the national and export demand of animal products and ensuring the socio-economic growth of its value chain actors. Under the PNDE, four SOs for the livestock sector seek to increase the productivity and competitiveness of animal value chains, with a view to achieving food security, increasing incomes, and preserving natural resources: (i) *SO1* is to increase the productivity of livestock and animal production systems; (ii) *SO2* is to create a favorable environment for sustainable livestock development; (iii) *SO3* is to improve market access and value addition for animal products; and (iv) *SO4* is to improve the governance and administrative management of institutions in the sector. The Livestock Sector Development Policy (LPDE) summarizes the short-term action plan to achieve PNDE strategic objectives:

- (a) *Program 1: Modernization and intensification of animal production* which aims to progressively intensify and modernize production systems through improvements in the animal health (sanitary and zootechnical) aspects of livestock production systems;
- (b) *Program 2: Animal health* which aims to prevent, control, and eradicate priority animal diseases;
- (c) *Program 3: Securing livestock*, mainly directed at pastoral systems, aims to create a suitable and secure environment for sustainable livestock production;
- (d) *Program 4: Improving conditions for market access of livestock products* which aims to add value to livestock products and improve access to markets for livestock value chain actors; and
- (e) *Program 5: Administrative management and coordination* which aims to strengthen the intervention and leadership capacity in livestock services.

**B. PROGRAM DEVELOPMENT OBJECTIVE (PDO) AND PDO LEVEL RESULTS INDICATORS**

26. **The Program Development Objective** is to enhance productivity and market access of priority commodity value chains and livestock, in the Extended Groundnut Basin⁶ and Agro-Pastoral Areas⁷.

27. **The PDO results indicators measure:** (i) yield increase of groundnuts; (ii) increase in exports of shelled groundnuts; (iii) decrease in mortality rate of small ruminants; (iv) increase in dairy farming productivity; (v) increase in volume of milk commercialized; and (vi) farmers reached with agricultural assets and services.

28. Enhancing productivity of priority commodity value chains and livestock will be measured by yield increase for groundnut, decrease in mortality rate of small ruminants and increase in dairy farming productivity, respectively. Market access will be measured by increase in export of high-value crops and increase in volume of milk commercialized. Number of smallholder farmers/herders reached is an agriculture core indicator.

C. PROGRAM SCOPE AND DESCRIPTION

29. **The proposed PforR is anchored in the vision for agricultural development articulated in the PSE and in the objectives of the corresponding sector programs (PRACAS II and PNDE):** achieving longer-term impacts on agricultural and livestock productivity while addressing the needs of farmers and herders for resilient production and revenue outcomes. It will support two subprograms (for crop and livestock development, respectively) that incorporate several critical interlinked investments and policy reforms, as well as capacity building, with expected high development impacts. The geographic scope of the Program includes groundnut-producing areas for the crop subprogram and the national territory for the livestock subprogram.

30. **The PforR will pursue integrated efforts to address the vulnerability of the Senegalese agricultural sector to climate change.** It will integrate the implementation of climate-smart practices for sustainable productivity growth with adaptation strategies for resilient production and livelihood systems and climate change mitigation strategies dedicated to achieving climate co-benefits. These strategies will enable production systems to adapt both to climate variability (more extreme weather in the short term) and change (more erratic weather patterns in the short term, rising temperatures in the medium term, and decreasing rainfall in the long term) and strengthen the resilience of farmers and herders for enhanced resilience to climate-related shocks. Adaptation will be increased in several ways: through better management of land and water resources in integrated rainfed agricultural and livestock production systems at the basin and farm levels; the adoption of climate-smart crop and pasture varieties; enhanced use of good practices for climate-smart agriculture and livestock production; integrated soil fertility (organic and mineral) and water management; and energy-saving systems for production, storage and value addition to agricultural and livestock products. The Program should also achieve climate co-benefits by mitigating GHG emissions—for example, through integrated soil management practices that

⁶ Extended Groundnut Basin means the departments with groundnut activities in the regions of Kaffrine, Kaolack, Sédiou, Fatick, Tambacounda, Kolda and Diourbel, and/or any other areas agreed upon in writing between the Recipient and the Association

⁷ Agro-Pastoral Areas means areas of the Recipient's territory with livestock activities



allow greater carbon absorption/storage and by reducing food and feed losses and waste. Such risk reduction mechanisms need to be synchronized with risk transfer including production risks and post-production risks to make farmer-level climate risk protection more accessible, affordable and viable in the long term.

31. **A central aim of the PforR is the development of the private sector⁸.** The Program will support the government's efforts to establish a favorable environment for private sector development in several ways: (i) it will focus on a set of reforms in the groundnut sector, livestock sector, and other key crop sectors; (ii) on institutional strengthening in sectoral organizations; and (iii) on targeted public investments to improve factors that promote competitiveness, such as productive infrastructure, market infrastructure, R&D and agricultural extension services, quality management, and the sustainable use of agricultural resources, among others.

32. **Targeting and beneficiaries.** The activities supported under the Program will benefit a broad range of stakeholders in the priority crop and livestock value chains (smallholders, cooperatives, R&D agencies, traders, exporters, and so on). It includes activities specifically designed to foster the inclusion of small- and medium-scale producers (including youth and women) and enterprises within modern value chains and enhance their capacity to produce and market value-added products by enabling access to knowledge, inputs, finance and markets. These beneficiaries will be supported through activities at the production level to strengthen productivity and resilience, as well as a variety of activities along the value chains to provide access to improved service delivery and market information and to better integrate value chains. Given the marginalization of women and youth in agriculture activities, and the variety of factors that undermine their active participation in the sector, the Program will be gender and youth sensitive. Therefore, the PforR will pay special attention to the inclusion of these two groups in all its activities. It is estimated that approximately 900,000 farmers will benefit from one or more of the Program activities, of which at least 30 percent and 50 percent will be respectively women and young farmers. The Monitoring and Evaluation (M&E) system will disaggregate indicators by gender and age. Finally, the government agencies involved in the Program—such as ISRA, the National Guarantee Fund for Priority Investments (FONGIP), and CNAAS—and the selected professional organizations will benefit from increased capacity to implement their mandates and to monitor and evaluate the results of their respective programs.

33. Table 1 (for PRACAS I and II) and Table 2 (for PNDE) provide an overview of the GoS programs, the key achievements to date, and the scope of the proposed PforR.

⁸ In the context of the Program, "private sector" includes a wide array of entrepreneurial activities, from smallholder farms, to cooperatives, small and medium agribusiness enterprises, and agri-food industries.

**Table 1: PRACAS key attributes and scope of the Program**

Attributes	PRACAS		PforR	
<i>Development Objective</i>	PRACAS aims to transform agriculture into a source of economic growth that enhances food security and nutrition, creates employment and raises rural incomes.		To enhance productivity and market access of priority commodity value chains and livestock, in the Extended Groundnut Basin and Agro-Pastoral Areas.	
<i>Program period</i>	2013-2017 (phase I) and 2020-2023 (phase II)		2020-2025	
Intervention Area	Strategic Initiatives	Key Achievements	Outstanding Issues	Proposed Program
<i>Restoration and expansion of seed production capacity</i>	<ul style="list-style-type: none"> - Certified seed production for rice, groundnuts, onions, food crops, fruits & vegetables - Seed control and certification system - National seed strategy - Seed development fund 	Dramatic increase in crop production owing to use of seeds/ inputs/ irrigation, e.g.: (i) rice: 1.13 million tons in 2017 (double 2014); and (ii) groundnuts: 1.4 million tons in 2017 (double 2014)	<ul style="list-style-type: none"> - Lack of certified seeds, except for rice - National Advisory Committee on Seeds and Plants (NACSP) not fully functional - Absence of seed production strategy and seed fund 	<ul style="list-style-type: none"> - Development of production capacity of certified seed production (CSA adapted varieties), including quality control and certification
<i>Fertilizer use and agriculture mechanization</i>	<ul style="list-style-type: none"> - Fertilizer subsidy - Fertilizer supply counters - Credit for equipment - Production of agriculture equipment 		<ul style="list-style-type: none"> - Fertilizer still used sub-optimally for lack of precise formulas - Small supply of mechanical equipment 	<ul style="list-style-type: none"> - Revamping of integrated organic and mineral fertilizer use, including strengthening of the quality control
<i>Irrigation development</i>	<ul style="list-style-type: none"> - New/ rehabilitated perimeters for irrigated rice (23,400 ha/23,250 ha), fruits and vegetables export (10,000 ha), and multi-crop purpose (8,000 ha) 	Increase by 8 percent of rice irrigated areas between 2016 and 2017 and improved maintenance of infrastructure overall.	<ul style="list-style-type: none"> - Full irrigation potential yet to be developed - Irrigation perimeters still poorly managed - Limited development of Water-User Associations 	<ul style="list-style-type: none"> - The Program does not support large-scale irrigation, only upgrading small-scale irrigation and drainage and enhancing management systems
<i>Agriculture research, training and extension</i>	<ul style="list-style-type: none"> - Promote research all along the value chain - Train national researchers and extension agents - Reorganize and strengthen agricultural advisory services 	<ul style="list-style-type: none"> - Strengthened agricultural research system with WAAPP⁹ - MSc and PhD fellowship program to 	<ul style="list-style-type: none"> - Lack of means for ISRA to produce foundation seeds - Weak capacity of National Agricultural 	<ul style="list-style-type: none"> - Aligning ISRA capacities for foundation seed production of adapted varieties

⁹ West Africa Agricultural Productivity Program (P129565)



	<ul style="list-style-type: none"> - Support the National Fund for Agriculture and Agri-Food Research 	<ul style="list-style-type: none"> build ISRA staff capacity - National Fund for Agriculture and Agri-food Research (FNRAA) funding of research program 	<ul style="list-style-type: none"> Advisory Agency (ANCAR) - Need to develop R&D ecosystem to foster private sector participation 	<ul style="list-style-type: none"> - Reinforcing advisory capacity (including ICT) of ANCAR for CSA practices and plant protection services Strengthen capacities of producer organizations to boost use of CSA practices
<i>Sector institutions/governance</i>	<ul style="list-style-type: none"> - Reorientation of MAER's towards its policy and regulatory functions, and delegation of agriculture service delivery - Build capacity of sector institutions, including MAER and affiliated entities - Strengthen inter-professions 	<ul style="list-style-type: none"> - Financial programming based on objectives in place at MAER - Three-year (2020-22) expenditure framework signed between MAER and Ministry of Finance and Budget (MFB) 	<ul style="list-style-type: none"> - Weak integrated financial management - Need to strengthen investment programming, coordination and M&E - Weak inter-professions 	<ul style="list-style-type: none"> - Reinforcing MAER planning, budgeting, statistics and M&E capacities at national and decentralized level - Reinforcing CNIA capacities
<i>Financial services for agriculture development</i>	<ul style="list-style-type: none"> - National strategy for agriculture financing - National Fund for Agro-Sylvo-Pastoral Development - Fund for Rural Sector Development - Develop agriculture insurance 	<ul style="list-style-type: none"> - Adoption of the WRS law - Interest Rate Subsidy Fund in place - Creation of new Agriculture Bank 	<ul style="list-style-type: none"> - Access to finance is still a major constraint for small producers - Other financial institutions apart from the National Agriculture Bank cannot access the Interest Rate Subsidy Fund 	<ul style="list-style-type: none"> - Improving access to financial services, including support for scaling-up agriculture insurance - Using e-voucher/digitalization for a more efficient insurance scale-up process
<i>Value addition and market access of agriculture products</i>	<ul style="list-style-type: none"> - Create rural roads (422 km) and market facilities - Promote exports of Senegalese products - Support artisanal and industrial processing - Support contractual agriculture 	<ul style="list-style-type: none"> - Storage facilities built - Some feeder roads constructed or rehabilitated - Increased private sector participation in processing (rice, horticulture) 	<ul style="list-style-type: none"> - Lack of adequate rural communication and market infrastructure - Limited contract farming - High post-harvest loss 	<ul style="list-style-type: none"> - Construction of small rural infrastructure, including piloting of WRS and promotion of contract-farming
<i>Quality control and management</i>	<ul style="list-style-type: none"> - Strengthening food quality/safety - Adhere to Sanitary and Phytosanitary norms 	<ul style="list-style-type: none"> - Department of Plant Protection (DPV) reinforced with laboratory equipment 	<ul style="list-style-type: none"> - Senegal agricultural exports still plagued with 	<ul style="list-style-type: none"> - Assuring control of aflatoxins on groundnuts and



	<ul style="list-style-type: none"> - Control pesticides per Codex Alimentarius - Establish regulatory framework for quality certification 	under the West Africa Agriculture Develop Program (WAAPP)	aflatoxin (groundnut) and fruit flies (mango).	treatment of fruit flies
<i>Environmental management</i>	<ul style="list-style-type: none"> - Construct/ rehabilitate environmentally smart rural infrastructure - Support environmental management by private enterprises - Mitigate land degradation 	<ul style="list-style-type: none"> - Dissemination by ANCAR of best agricultural practices for soil and water management 	<ul style="list-style-type: none"> - Land degradation and weak soil fertility is widespread, especially in the groundnut production basin 	<ul style="list-style-type: none"> - Promotion of CSA technologies to improve integrated soil fertility and land management/ use
<i>Agriculture subsidy policy</i>	<ul style="list-style-type: none"> - Reduce agricultural subsidies from 0.5 to 0.3 percent of GDP - Eliminate VAT and import taxes on agriculture equipment - Disengagement of the State of procurement agriculture inputs - Subsidy of premium for crop insurance 	<ul style="list-style-type: none"> - Input and seed subsidies in place 	<ul style="list-style-type: none"> - Lack of proper targeting of subsidy programs - Lack of transparency and efficiency - Uncertified seeds subsidized 	<ul style="list-style-type: none"> - CSA innovation targeted smart subsidies - Revamping subsidy program including the development of an exit plan from insurance premium subsidies

Table 2: PNDE Key attributes and scope of the Program

Attributes	PNDE		PforR	
<i>Development Objective</i>	PNDE aims at improving the productivity and competitiveness of animal value chains and accelerating their development, with the perspective of realizing food security, increasing incomes and preserving natural resources		To enhance productivity and market access of priority commodity value chains and livestock, in the Extended Groundnut Basin and Agro-Pastoral Areas	
<i>Program period</i>	2017-2032 ¹⁰		2020-2025	
Intervention areas	Strategic Initiatives	Key Achievements	Outstanding Issues	Proposed Program
<i>Increased productivity and animal production</i>	<ul style="list-style-type: none"> - Preservation and improvement of animal health - Promotion of animal welfare - Improvement of the genetic potential of livestock - Support to the professionalization of stakeholders 	<ul style="list-style-type: none"> - National Strategic Plans for Contagious Bovine Pleuropneumonia (CBPP) and <i>Peste des petits ruminants</i>(PPR) developed - Veterinary Services data management systems rolled-out 	<ul style="list-style-type: none"> - Vaccination coverage low, and strategy inadequate for poultry diseases - Data regarding livestock management hardly accessible by producers 	<ul style="list-style-type: none"> - Support to PPR eradication and other priority diseases control - Establishing conditions for increased forage/fodder production and quality standards for feed - Improving producers' organizations and SMEs

¹⁰ PNDE sets the vision and priority axis over a 15-year period. PNDE is operationalized through detailed budgeted plans covering 3-year periods.



		<ul style="list-style-type: none"> - ISRA vaccination production capacity established 	<ul style="list-style-type: none"> - Forage and feed production limited and low quality - Producers' organizations have low capacity 	capacity in livestock production
<i>Environment favorable to sustainable development of farming systems</i>	<ul style="list-style-type: none"> - Management of pastoral resources - Improvement of rangelands and access to feed - Strengthening of pastoral facilities - Strengthening of livestock systems resilience - Mitigation of the environmental impact of livestock systems 	<ul style="list-style-type: none"> - Support to investments in pastoral infrastructure and natural resources management - Investments in improved management of market infrastructure 	<ul style="list-style-type: none"> - Insufficient Infrastructure - Legal framework (Pastoral Code) implementation lagging - Lack of social safety nets, access to basic service - Issues of animal theft - Lack of environmental standards adapted to different livestock systems 	<ul style="list-style-type: none"> - Pastoral activities are not covered under this program
<i>Improved marketing of animal products</i>	<ul style="list-style-type: none"> - Reinforcement of infrastructure and equipment for collection, processing and marketing of animal products - Promotion of animal health standards - Promotion of creation of innovative products adapted to the demand 	<ul style="list-style-type: none"> - Numerous initiatives to support milk value chains (in pastoral and mixed systems) 	<ul style="list-style-type: none"> - Widespread lack of basic equipment and infrastructure for milk value chain - Limited knowledge in processing of milk - Limited capacity of actors and service providers 	<ul style="list-style-type: none"> - Supporting the organization of producers and contract farming - Enhancing access to equipment, infrastructure and knowledge
<i>Strengthened sector institutional framework</i>	<ul style="list-style-type: none"> - Reinforcement of intervention capacities of livestock services - Improvement of the livestock sector legislative and regulatory framework - Strengthening planning, M&E systems, statistics and communication - Gender integration 	<ul style="list-style-type: none"> - Draft of a new animal and public health code developed - Modernization of MEPA's infrastructure initiated 	<ul style="list-style-type: none"> - Poor quality of data - Operational capacity lacking at decentralized level - Lack of skills to perform critical functions - MEPA's weak operating systems 	<ul style="list-style-type: none"> - Supporting MEPA's human resources skills development and equipment - Establishing solid legal basis, and data - Developing a Livestock Master Plan

PROGRAM DESCRIPTION

34. The PforR draws on selected activities of PRACAS II and PNDE, with a focus on the following three priority Results Areas (RAs).

Results Area 1: Improved crop and livestock productivity and resilience

35. ***Sub-Results Area 1.1.a: Increased crop productivity.*** Results under SRA 1.1.a will be achieved through the sustainable intensification of major agricultural production systems, particularly groundnuts,



and other high potential priority crop (maize, sesame, fonio, onions, potatoes, fodder). The following four main sets of activities will be supported: (1) Adequate production/availability of certified seed, especially of drought-tolerant varieties. This will entail (i) support to ISRA for foundation seed production and to selected certified seed multiplication cooperatives and private enterprises; phasing out the current government program subsidizing uncertified groundnut seed; (ii) operating costs of the National Advisory Committee on Seeds and Plants (NACSP); (iii) training of seed value chain actors; and (iv) capacity building in the seed quality control and certification system; (2) Access to quality inputs (fertilizer, pesticides, planting material, and small agricultural equipment). This will include (i) soil fertility mapping and integrated fertility management recommendations in groundnut-producing zones; (ii) support to *Centre Régional de Recherches en Ecotoxicologie et Sécurité Environnementale* (CERES) to obtain accreditation for fertilizer quality control; and (iii) revision of the current subsidy program to improve targeting modalities; (3) Access to quality agricultural support services (field and digital innovation platforms): (i) dissemination of agro-climatic information, CSA technologies, and energy-efficient innovations; (ii) training producers in climate risk and resilient husbandry practices and integrated natural resource management; (iii) building capacity of POs and SMEs engaged in quality production and primary produce transformation; (iv) reinforcement of the capacity of ANCAR and technical assistance to POs for establishing auxiliary advisory services; and (v) use of biopesticides and reinforcement of MAER's plant protection services; and (4) Climate-risk management and sustainable use of agricultural resources (land, water and biodiversity). This will entail dissemination of CSA technologies for improved soil and water management in rainfed systems, and the integration of participatory land management activities for crops and livestock at plot and basin level. The current input subsidy program will be revised to increase its targeting of women to address the gender gap in productivity that is partly linked to the fact that women have less access to productive resources, among them inputs. As all these activities offer great opportunities for youth employment, awareness campaigns will be prepared in order to reach youth through their own associations or through farmers' organizations. Their receptivity towards innovations and technology will be a strong asset.

36. **Sub-Results Area 1.1.b: Increased livestock productivity.** SRA1.1b will support the sustainable intensification of selected livestock production systems, with a greater focus on dairy, small ruminant, and poultry production, which are closely related to groundnut-based production systems. The focus will be on four main sets of activities (among others): (i) Improving animal health: implementing the National Strategic Plan for PPR eradication (necessary to support the development of sheep and goat production), ensuring vaccine quality, marking of animals, roll-out of the vaccination campaigns, and sero-surveillance to meet requirements for eradication; developing a new strategy for poultry vaccination against Newcastle disease and fowlpox to significantly increase protection, with attendant strengthening of national capacity to produce vaccines and pilot the strategy in selected areas; (ii) Increasing availability and quality of forage/fodder and feed: establish conditions to boost forage/fodder production as a strategy for adapting to climate variability and change, including the production of foundation forage/fodder seed by ISRA, the development of a network of multipliers and certification processes to guarantee the quality of seed placed on the market, and awareness and communication activities for livestock producers; improve the capacity to transform agriculture by-products into nutritious feed; and with relevant stakeholders, develop a joint strategy on feed and revamp the norms and regulatory



framework specifying the conditions for feed production and marketing to ensure the quality of feed products; (iii) Improving genetics for dairy production: prepare and adopt a comprehensive National Genetic Improvement Strategy and Plan, taking into account lessons from past programs and trends; and (iv) Improving animal housing and herd management: development of detailed guidelines for various categories of production systems, different scales of production (small to medium), and species (all major species produced), reflecting cost-efficient, easily accessible and energy saving equipment, techniques and tools, and results expected in production and productivity from adopting these resilient practices. In parallel, MEPA will continue to work on mechanisms to facilitate access to credit for livestock producers to implement the related investments.

37. ***Sub-Results Area 1.2: Increased agricultural resilience.*** Results under SRA 1.2 will include diversifying the agricultural production base and establishing a cash transfer program. The following two main sets of activities will be supported: (i) Strengthening the agricultural production base: rehabilitation of degraded soils through investments (small catchment weirs, retention basins, anti-salt structures, windbreaks, etc.); rehabilitation and development of new small-scale perimeters, including irrigated orchards; provision of corresponding small-scale energy-efficient equipment, agricultural inputs (including seed and fertilizer); and (ii) Establishing a cash transfer program under the ongoing social protection programs to enable the poorest farmers, who lack access to insurance, to recover from climate-related disasters or drastic groundnut price decrease through the provision of emergency relief funds and assets to restart production cycles. Specific awareness campaigns will be organized towards women, and tailored capacity-building programs will be developed to reinforce their capacities in this area.

Results Area 2: Improved business environment and market integration

38. ***Sub-Results Area 2.1: Improved groundnut business environment:*** SRA 2.1 will support three main sets of activities: (i) Lifting distortionary policies and regulatory measures: removal of provisions impeding free primary marketing and related regulations adversely affecting transport, quality control, and competition; revision of the system for setting the producer price for groundnuts, using the world market price as the reference price, and phasing out the subsidy to groundnut oil processing companies; (ii) Reorganizing the groundnut inter-profession and establishing PPPs: technical assistance to restructure the CNIA and subsequent action plan; and contractual agreements between POs and buyers; and (iii) Reinforcing agri-food product quality control and meeting export quality standards: dissemination of appropriate climate-smart technologies to control aflatoxins in groundnuts; extension of coverage for treatment of fruit flies; and strengthening the quality control system for aflatoxin and fruit flies.

39. ***Sub-Results Area 2.2: Increased livestock market access:*** SRA 2.2 will support two main sets of activities: (i) providing targeted support (CSA technical and business training, equipment) to producers, POs and SMEs to connect with and meet the requirements of the main companies for processing and marketing dairy products in urban areas, to increase their procurement of locally produced milk; and (ii) providing targeted support to milk producers and value chain actors (milk collection, storage, processing, and sales) to improve value addition, and mainly local sales of milk and milk products, in less-connected rural areas. The rolling out of the Program will rely heavily on professional organizations and private sector actors, and other stakeholders from the national to the local level, establishing local multi-actor platforms



to support the development of resilient value chains in the main dairy-producing areas. To address the gender gap in income, that is partly linked to women fewer access to markets, specific training and capacity building will be provided to women and women's groups in order to foster their participation in business alliances and benefit widely from new technologies and equipment.

40. ***Sub-Results Area 2.3: Increased access to financial services:*** Activities to be supported under SRA 2.3 will include: (i) Expanding the WRS to promote its use in order to improve access to finance for agricultural producers, aggregators, traders and processors; (ii) Improving access to agricultural insurance, with the objective of reaching at least 400,000 farmers and developing this business line with a view to securing sustainability in the long term (an exit plan from the current premium subsidy system should be in place by 2024). This will entail that GoS pays off current premium subsidy arrears due to CNAAS as well as the reinforcement of more upstream activities including: mass awareness campaigns on the benefits of agricultural insurance; capacity-building for collecting rainfall as well as remote sensing data to design index-based insurance products; developing tools for a complete digitization of the whole underwriting process, as well as policy dissemination and claim settlement; and developing an early warning system, including an agricultural observatory. Insurance will protect smallholders from weather-related events and, depending on the coverage, claim payments may enable them to repurchase seeds and secure agriculture loans for farm improvement.

41. The Program does not plan to completely phase out insurance premium subsidies by 2024. It aims to rationalize the subsidy system in such a way that only the poorest farmers would benefit from a 50 percent premium subsidy and the "top of the pyramid" (commercial) farmers would gradually benefit from less and eventually no subsidies. Senegal is in a particular situation whereby there is a unique insurance company – CNAAS – specialized in the underwriting of agricultural risks. Since 2012, this company has already been benefitting from technical and financial assistance from WBG's Global Index Insurance Facility (GIIF) to develop an index insurance business line and reach scale. The company's portfolio is expected to grow significantly in the next few years. The annual premium subsidy allocation provided by GoS is expected to represent less than 30 percent of the average premium volume that is projected to be collected annually in the next five years. In this respect, protecting the sustainability of the system will imply developing a smart "exit strategy" that will maintain some level of subsidies to the poorest farmers, while the biggest farmers would gradually benefit from less and eventually no subsidies moving forward. Adding to that, the fact that CNAAS will be able to recover a significant portion of its premium subsidy arrears from GoS as part of the PforR requirements will provide it with additional resources to support its scale-up strategy and ultimately reduce directly the commercial premium on insurance contracts.

Results Area 3: Improved sector governance, coordination, and program management

42. The PforR will support the strengthening of the organizational and institutional environment of agri-food value-chains and improve the coordination and execution of government programs in the agricultural and livestock sector, while meeting climate adaptation and mitigation challenges. RA 3 will support five main sets of activities (among others): (i) Strengthening the policy dialogue on agriculture: operating support for the High-Level Agro-Sylvo-Pastoral Advisory Committee (CSOASP) and Regional



Agro-Sylvo-Pastoral Committees (CRASPs); (ii) Reinforcing the technical support services of MAER and MEPA, focusing on building capacity in agricultural research (ISRA), agricultural extension and training, and animal health services, including through the development and approval of an upgraded regulatory framework, as well as the development of a Livestock Master Plan to establish solid grounds for the development of the sector; (iii) Reinforcing capacity at MAER and MEPA for program planning, statistics, and M&E (and harmonizing the M&E system across different development initiatives): support to strengthen the ability of MAER and MEPA to plan projects and coordinate with stakeholders, collect statistics, and run an efficient M&E system, with a focus on implementing PRACAS II and PNDE; (iv) Providing other support to strengthen capacity: providing adequate means and facilities, for MAER and MEPA agents to perform their respective tasks and implement priority surveys; and (v) Supporting the two PforR Technical Coordination Teams (TCTs) for the crop and livestock subprograms, respectively.

43. **Program activities will generate climate adaptation and mitigation co-benefits.** Under RA 1, activities related to increasing climate change co-benefits include the promotion of CSA practices for more efficient/ productive crop and livestock production systems that optimize energy and natural resource use, and activities related to weather forecasting and early warning systems. Such efforts include, for example, facilitating the diffusion of agro-meteorological information to farmers to increase their ability to adapt to climate change, or promoting the use of renewable energy for food processing units. Improved animal health (reduced incidence and prevalence of contagious diseases) and nutrition (forage and fodder production in particular) will improve efficiency by increasing animal productivity and reducing losses, reduce the need for inorganic fertilizer, and contribute to carbon sequestration in soils, which will increase climate adaptation and mitigation impacts. Climate change adaptation and mitigation co-benefits will also arise from the diffusion of a range of CSA technologies and innovations adapted to selected value chains in targeted agro-ecological zones. Under RA 2, facilitating access to markets will bring about adaptation and mitigation co-benefits through improved market information, which will enable producers to adapt to climate change by improving the timing of harvests and reducing post-harvest losses, or interventions supporting the adoption of quality schemes, such as certification schemes containing provisions to help farmers adopt new technologies designed to increase their resilience to climate change and climate variability. Improved market access will lead to more efficient herd management in the livestock subsector, as farmers will react more to market signals. Under RA 3, the integration of climate change issues in participatory sector planning, program implementation, M&E at all levels will contribute directly to climate change adaptation and mitigation¹¹.

44. **Program Financing.** Table 3 presents the Program financing parameters.

Table 1: Financing of the Program for Results

Source	Amount (US\$ million)	% of total
IDA	150	71
Government and local beneficiaries	60	29
Total Program financing	210	100

¹¹ See details in Annex 3.



45. **Program Preparation Advance (PPA).** A PPA in an amount of \$995,000 was approved to finance Program preparation activities, including: (a) carrying out in-country consultations on PRACAS II and PNDE, (b) preparation of program operational documents and related institutional and capacity gaps assessments and action plans; (c) training on the use, benefits and challenges of implementing PforR instruments; and (d) operational support to the Coordination Unit.

D. DISBURSEMENT-LINKED INDICATORS AND VERIFICATION PROTOCOLS

46. **Disbursement-Linked Indicators (DLIs).** The proposed Program will disburse against a set of agreed upon DLIs, in accordance with demonstrated evidence of achieving a number of strategic and monitorable targets. The DLIs represent key milestones in the achievement of Program outcomes. They were selected based on the following criteria: (i) a realistic balance between output and outcome indicators; (ii) a focus on the highly strategic, key interventions that must be implemented effectively to achieve the Program Development Objective, the PSE high-level objective for the agricultural sector, and contributions to climate change adaptation and mitigation; and (iii) realism in terms of implementation and scalability to prevent disbursement of proceeds from being held up at critical stages of implementation. Indicators that address multiple RAs were also given priority. To keep the number of DLIs manageable, some indicators were consolidated into one DLI. Table 4 lists the DLIs; for more detail, see Annex 3.

Table 2: Summary of Disbursement-Linked Indicators for the PforR

Disbursement Linked Indicator (DLI)		DLI (US\$ million)	DLI scalability (yes/no)
Results Area 1: Improved crop and livestock productivity and resilience			
1	Quantity of certified groundnut seeds acquired annually (tons)	35.0	Yes
2	Cumulative quantity of certified seeds acquired for diversification crops (tons)	15.0	Yes
3	Percentage of subsidy targeted to small producers and climate-smart technologies	20.0	Yes
4	Vaccination coverage rate for small ruminant plague (PPR) (% coverage)	30.0	Yes
5	Cumulative quantity of fodder certified seeds acquired by producers (tons)	10.0	Yes
Results Area 2: Improved business environment and market integration			
6	Groundnut inter-profession (CNA) restructured	10.0	Yes
7	Number of producers with access to agriculture insurance for crops and livestock per year	10.0	Yes
8	Operationalization of the WRS in the extended groundnut basin	4.01	Yes



9	Number of milk collection centers supported and/or equipped and operational	5	Yes
Results Area 3: Improved sector governance, coordination, and Program management			
10	Monitoring and Evaluation system for agriculture and livestock performance	10	No
11	Preparation advance to be repaid accordance with Section 2.05 (a) of the General Conditions (Not DLI)	0.99	
Total		150.0	

47. **Rationale for selecting DLIs.** The rationale for the selection of the DLIs is presented below:

- (a) **DLI #1: Quantity of certified groundnut seeds acquired annually.** This DLI seeks to ensure that producers have access to widely available, quality seed of improved varieties of groundnuts that are adapted to changing climatic conditions and resistant to pests and diseases. For that reason, the DLI regards the seed subsidy (leading to phasing out subsidies for non-certified seeds) and encourages the production of foundation seeds (by ISRA) and certified seeds (by professional seed cooperatives and private enterprises). One of the Program's main activities will be to help the GoS produce enough certified seeds to cover the projected requirements. Meeting certified seed production requirements, together with the proposed reforms of the input subsidy (DLI #3), will ensure that certified seeds are produced and used effectively. This DLI is under the responsibility of MAER;
- (b) **DLI #2: Cumulative quantity of certified seeds acquired for diversification crops.** This DLI seeks to ensure that producers have access to widely available, quality seed of improved varieties of diversification crops that are adapted to changing climatic conditions and resistant to pests and diseases. DLI #2 will foster crop diversification out of groundnuts, which requires assistance for ISRA to produce foundation seed, and for professional seed cooperatives and private enterprises to produce certified seeds, adopt climate-smart practices as well as other means for developing diversification crops. This DLI is under the responsibility of MAER;
- (c) **DLI #3: Percentage of subsidy targeted to small producers and climate-smart technologies.** The GoS will develop and implement a new climate-smart subsidy plan, which will emphasize improved targeting of subsidy benefits to small producers (cultivated area of less than 5 ha) as well as on the use of CSA technologies (including improved seeds, fertilizer and farming equipment). This DLI is under the responsibility of MAER;
- (d) **DLI #4: Vaccination coverage rate for PPR.** Expanding the coverage of PPR vaccination is important to improve the health and productivity of small ruminants (in conjunction with DLI#5 on fodder production). DLI #4 covers the incremental vaccination coverage against PPR of small ruminants. This DLI is under the responsibility of MEPA;
- (e) **DLI #5: Cumulative quantity of fodder certified seeds acquired by producers.** The lack of fodder remains a major binding constraint on improving livestock productivity and the development of animal production in Senegal. MEPA will determine the main fodder crops



- that will receive attention. The Program will retain the cumulative quantity of certified fodder seeds produced. This DLI is under the responsibility of MEPA;
- (f) **DLI #6: Groundnut inter-profession (Cニア) restructured.** A restructured Cニア will play a major role in developing the groundnut value chain by overseeing the process for setting the groundnut price and serving as the inter-profession's interlocutor with the GoS. The restructured Cニア will develop an action plan that the PforR can help implement to ensure that it becomes operational. The three main milestones of this DLI are: (i) Cニア restructured with an action plan; (ii) framework agreement signed between Cニア and the GoS; and (iii) action plan implemented. This DLI is under the responsibility of MAER;
- (g) **DLI #7: Number of producers with access to agriculture insurance for crops and livestock.** This DLI intends to facilitate access to financial services and promote resilience to shocks affecting crop and livestock value chains. It includes three milestones: (i) paying off premium arrears by GoS (underway); (ii) providing insurance coverage to an additional 131,000 small farmers under the current premium subsidy scheme (complementing the current support provided through the GIIF, a joint IFC/WB program to scale up agriculture insurance in Senegal, with about 269,000 farmers covered in 2019); and (iii) developing an exit strategy regarding the premium subsidy scheme emphasizing targeting of small producers, after the additional 131,000 farmers are insured. This DLI is under the responsibility of the MFB;
- (h) **DLI #8: Operationalization of WRS in the extended groundnut basin.** The Ministry of Commerce and SMEs (MCPME) supported the operationalization of the Regulatory Body for the Warehouse Receipt System (ORSRE)¹² and set up an incentive framework for the construction and operationalization by the private sector of infrastructure storage. This DLI aims to promote the WRS in order to improve access to finance for agricultural producers, aggregators/ off-takers and processors. It has three milestones: (i) ORSRE's key personnel has been appointed or recruited, and ORSRE has been provided with its own budget; (ii) 10 warehouses meet ORSRE's licensing requirements allowing warehouse operators to issue warehouse receipts, from a baseline of zero; (iii) receipts are financed by financial institutions. This DLI will be placed under the responsibility of MCPME;
- (i) **DLI#9: Number of milk collection centers supported and/or equipped and operational.** MEPA will support the establishment of a network of energy-efficient milk collection centers in order to allow producers to sell, store and add value for locally produced milk. This DLI is under the responsibility of MEPA; and
- (j) **DLI#10: Monitoring and evaluation system for agriculture and livestock performance.** It is critical to the success of the Program that both MAER and MEPA develop an M&E system capable of tracking performance, especially since these two line-ministries have just adopted program-based budgeting. This DLI is under the separate responsibility of MAER and MEPA for the development of each subprogram M&E system.

¹² ORSRE is the body that oversees the operation of the system and issues approvals to warehouse managers to enable them to issue warehouse receipts recognized by financial institutions.



48. **Under the proposed Program, the achievement of the DLIs will provide the basis for disbursement.** For scalable DLIs, payment will be proportional to the verified results achieved for the DLI in each period. Only DLI #10 is not scalable; in this case, the corresponding payment is triggered only when the target is achieved in full. The following verification protocols will be used:

- (a) **Data sources/agencies:** Through their respective TCTs in the Office of the Secretary General (SG), MAER, as the lead implementing agency for the crop subprogram, and of MEPA, as the lead implementing agency for the livestock subprogram, will collect and consolidate data and report on achievement of the DLIs regarding their individual sub-program. The providers of technical data on DLIs at MAER and MEPA will be primarily the Budget Program (BP) managers, as well as the technical directorates (Seed Department -DISEM at MAER, and Veterinary Service and Livestock Directorates at MEPA), and the Planning, Statistics and M&E Directorate/ Unit (DAPSA) at MAER and the Study and Planning Unit (CEP) at MEPA). Other data providers outside MAER and MEPA will be ISRA (DLI #1 and #2), ANCAR (DLI #3), CNIA (DLI #6), CNAAS (DLI #7), and the MCPME (DLI #8);
- (b) **Verification mechanism:** The Program embeds a rigorous and transparent verification process building on international auditing and assurance engagement standards and practices, and current portfolio experience on DLI verification. The verification mechanism and procedures will be detailed in the Implementation Manual; and
- (c) **Assurance engagement involves three parties:** The Independent Verification Agent (IVA) competitively recruited according to ToRs prepared jointly by the line Ministries and agreed with the World Bank. Each line ministry will seek their Internal Inspection advice on the ToRs. The World Bank will review the IVA selection process and provide advice to the Borrower in order to ensure the selection of the best qualified IVA.

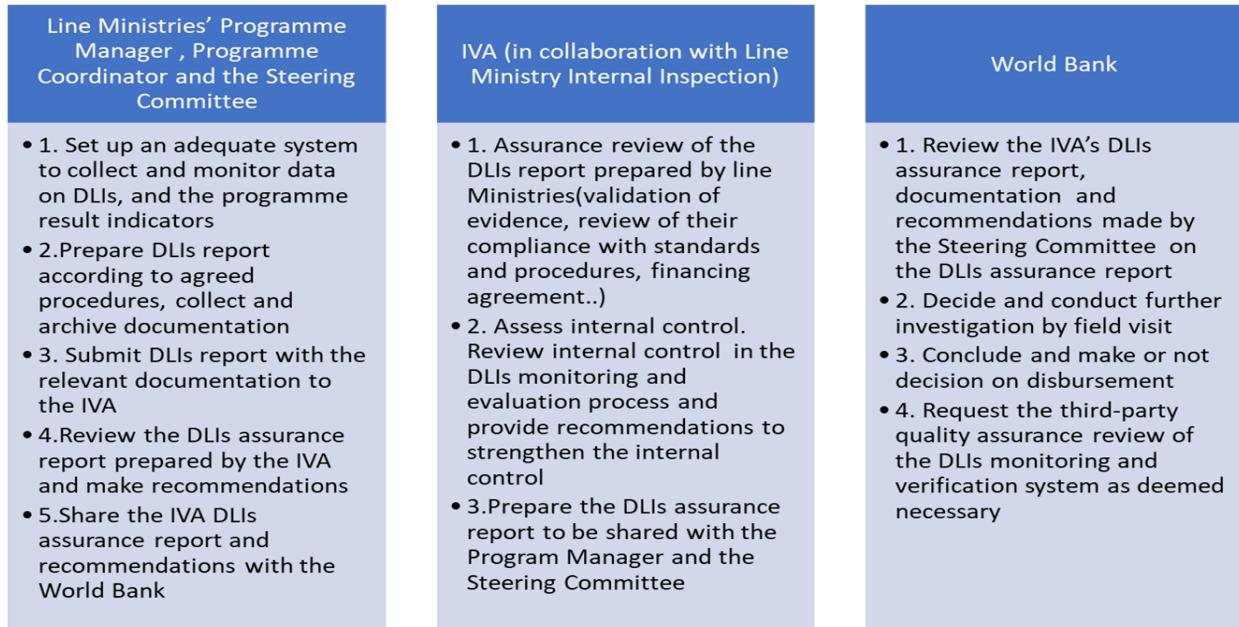
49. Line ministries (MAER, MEPA, MFB and MCPME) hold the responsibility to: (i) prepare and present the DLI reports in accordance with the agreed procedures and reporting framework; (ii) design, implement and maintain internal controls relevant to the preparation and presentation of DLI reports that are free from material mis-statements, whether due to fraud or error; and (iii) provide comprehensive and timely information to the IVA.

50. The IVA's role consists of providing assurance that the DLIs reports are free from material mis-statements and use relevant criteria and adequate evidence for reaching the assurance engagement conclusion. The IVA will work with and include the line ministry Internal Inspectorates during its review mission in order to build on their insider knowledge, and know-how, and build their capacity on assurance engagement in line with international practices and standards. The IVA's DLIs assurance report will be shared with line ministries and the World Bank. The assurance report will include a conclusion on achievement or not of DLIs and the reliability of the internal control system around the DLIs data collection and monitoring. The SC will review the DLIs assurance report and make recommendations. The SC's recommendations and the IVA assurance report will be sent to the World Bank by the SC. The World Bank, after the analysis and review of the assurance report and the SC's recommendations will make its own conclusions and decide on whether disbursement should be made and the amount to be disbursed. The



World Bank review could be a desk review or complemented with a field mission. The timeline of the IVA intervention will be flexible and depend on the timeline of the achievement of DLIs, but at least one intervention per fiscal year is envisaged to allow disbursement according to the Program disbursement schedule. Figure 1 depicts the roles and responsibilities for the stakeholders in the verification mechanism. At any time, the World Bank could commission a third-party quality assurance review of the DLIs verification process in order to further strengthen the robustness of the process being implemented.

Figure 1: DLIs verification

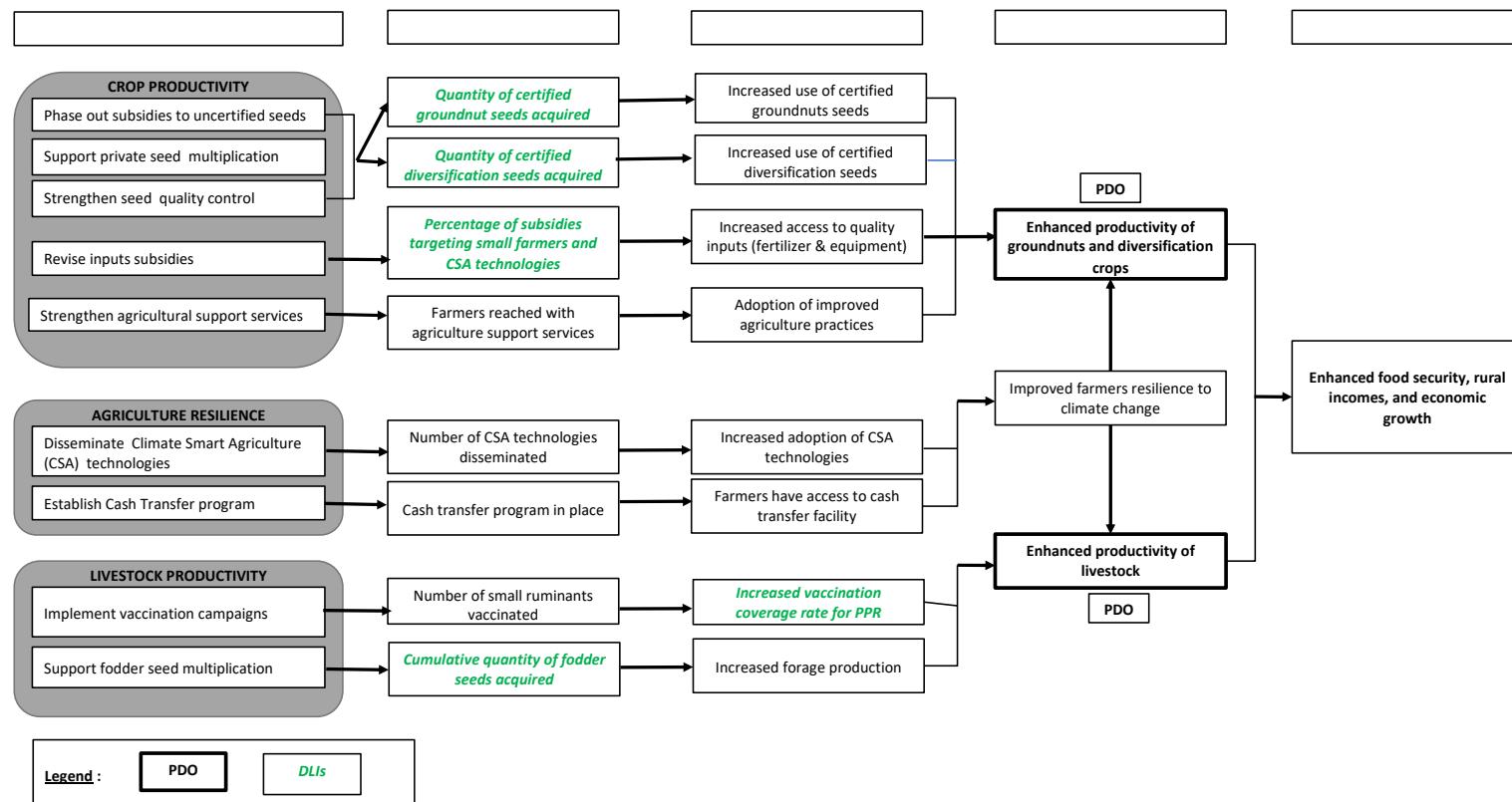


E. THEORY OF CHANGE

51. **Figure 2 (a) and (b) depict the Program's logical chain. The proposed Program is structured around the following twin complementary areas:** (i) increased productivity, increased agriculture resilience, and increased livestock productivity; and (ii) improved business environment and market integration for groundnuts and dairy products.

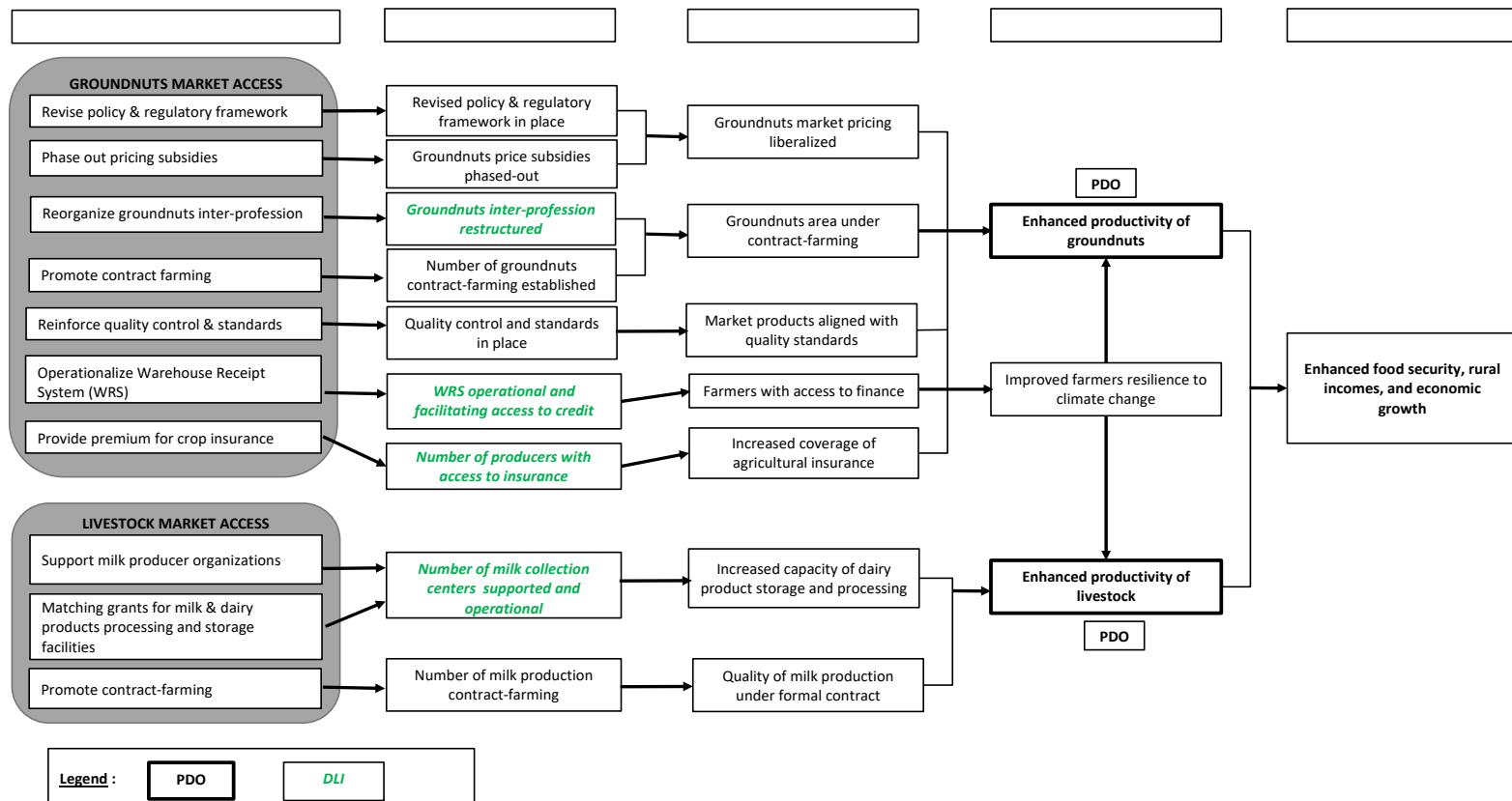


Figure 2 (a): Senegal Agriculture and Livestock Competitiveness Program Theory of Change (Crop Productivity, Agriculture Resilience and Livestock Productivity)





**Figure 2 (b): Senegal Agriculture and Livestock Competitiveness Program
Theory of Change (Market Access)**





F. ROLE OF DEVELOPMENT PARTNERS

52. **The proposed Program will coordinate its activities internally across the World Bank's Global Practices (GPs) and externally with key development partners involved in agriculture and rural development in Senegal.** Within the Bank, the Program will further pursue the partnership developed with IFC (i.e.; for the promotion of the WRS) and the Finance, Competitiveness and Innovation Global Practice (FCI) (i.e.; agriculture insurance). It will also coordinate with other development partners, such as the International Fund for Agriculture Development (IFAD) through its rural diversification programs in western and eastern Senegal, the United States Agency for International Development (USAID), which has partnered with the WBG in analyzing the groundnut value chain; the African Development Bank (AfDB), which is exploring ways to support processing zones for staple crops in Senegal; and the Islamic Development Bank (IDB), which is supporting pro-poor operations in rural areas; and the European Union (EU). Other partners include the Canadian Council for International Cooperation, the Italian Agency for Development Cooperation; and the French Development Agency, all of which are longstanding partners of the GoS, particularly in groundnut-producing areas.

53. **IFAD has expressed special interest in supporting the Program.** The Government has recommended that IFAD be involved in the financing of the PfoR due to its experience in supporting diversification of agriculture and livestock activities for smallholders. IFAD has contributed to the Program design by sharing knowledge, notably from PAFA-E (*Projet d'Appui aux Filières Agricoles-Extension*) and PARFA (*Projet d'Appui à la Résilience des Filières Agricoles*) projects, which are being implemented in the Groundnut Basin. IFAD will provide parallel financing in the amount of US\$7 million from these two projects to finance capacity building and other technical assistance to public services and farmer organizations.

III. PROGRAM IMPLEMENTATION

A. INSTITUTIONAL AND IMPLEMENTATION ARRANGEMENTS

54. **Basic implementation principles and arrangements.** The Program has a three-tiered governance structure with a Steering Committee (SC), two Technical Committees (TCs) and two Technical Coordination Teams (TCTs). MFB will be responsible for overall steering of the Program through the SC with a twin critical role: (i) ensuring the engagement and coordination of ministries and other entities involved in implementing the Program, especially those external to the agricultural sector (such as the Ministry of Commerce and Small and Medium Enterprises and the inter-professions), and (ii) mitigating the risks associated with inter-ministerial coordination. MAER will be responsible for overseeing the crop subprogram, and MEPA the livestock subprogram with the Office of the Secretary General (SG) serving as Sub-Program Coordinators (SPCs). At ministerial level, the Program will adhere to PRACAS II and PNDE implementation arrangements, which have their own governance structure and make use of MAER's and MEPA's own services for Program implementation. Additional technical support will be provided by the TCs on a consultative basis. Detailed operational guidelines will be spelled out in the Program Operational Manual (POM). Both MAER and MEPA have experience with large donor-financed programs, including Bank-financed operations. Specific information and training efforts will be required at the Program's inception to ensure that key staff involved at that level are well informed about the details of the Program



activities and modalities (as per the Program Operations Manual-POM) and adjustments to existing instruments introduced with support from the Program. Figure 3.1 illustrates the Program implementation arrangements.

55. MAER and MEPA will use their own procedures to implement the Program, including the procedures governing the new Budget Program (BP) approach just initiated in 2020. In this respect, the TCTs will work closely at central level with (i) the BP coordinators for PforR activities under the latter's mandates, as primary interlocutors; each BP coordinator will have a focal staff exclusively dedicated to the PforR; (ii) the Department of Agriculture Analysis, Forecasting and Statistics (DAPSA/MAER), the Studies and Planning Unit (CEP/MEPA) for planning and programming, and the Department of General Administration and Equipment (DAGE/MAER and MEPA)¹³ for financial management and procurement activities; and (iii) the other technical directorates as required for special technical matters under the PforR. At decentralized level, the PforR will operate through MAER's Regional Department for Rural Development (DRDRs) and MEPA's Regional Livestock Services (SREs) (see details, including the Program's organizational chart, in Annex 3).

56. **Steering Committee (SC).** The SC will be the highest Program oversight body. It will meet at least twice a year to discuss results and challenges, review Program planning and budgeting, review the DLIs assurance report prepared by the Independent Verification Agent (IVA) and advise on strategic directions, share the IVA assurance report and recommendations with the World Bank for review and decision and take immediate operational decisions as required. It will validate all official Program implementation reports prepared by the two TCTs. The SC will be chaired by the Secretary General of the MFB; it will be co-chaired by the SGs of MAER and MEPA and comprise officials from sector ministries and entities involved in implementing the project (Ministry of Commerce and Small and Medium Enterprises—M CPME, ISRA, etc.). The committee will include representatives of the private sector, groundnuts producer organizations, and civil society so that they may contribute to good governance and voice their concerns as needed.

57. **Technical Committees (TCs).** The two TCs will provide technical advice to the SC, as well as to MAER's and MEPA's SGs in their role as Sub-Program Coordinators (SPCs) for the crop and livestock subprograms respectively. They will have a consultative role. Their advice will be sought for all aspects of Program implementation that will require technical decisions on the part of the SPCs. Each TC will be composed of about ten experts chosen by the SPCs, based on their expertise as relevant for Program implementation. The TCs will meet at least every quarter, or at shorter intervals whenever necessary, following the request of the SPCs.

58. **Technical Coordination Teams (TCTs).** These teams will be located with the SG's office of MAER and MEPA. They will provide technical support to the SGs for the implementation of the PforR in liaison with the Budget Programs Units and other implementing entities. The TCTs will be small units headed by a Sector Specialist, and consisting of an Administrative Officer, an Environmental Safeguards Specialist, a

¹³ Direction de l'Analyse, de la Prévision et des Statistiques Agricoles (DAFSA/MAER), Cellule des Etudes et de la Planification (CEP/MEPA) et Direction de l'Administration Générale et de l'Équipement (DAGE/ MAER and MEPA).



Social Safeguards Specialist, and a M&E Officer. These staff will be civil servants selected from within the staff of MAER, MEPA, or affiliated entities, or independent consultants purposely recruited from outside MAER and MEPA under specific ToRs. The daily technical supervision of PforR activities will rest with the two TCTs. They will vet Program activities and determine DLIs have been adhered to and disbursement can be authorized. They will also prepare the requests for financing related to the DLIs and submit them to MFB for onward submission to the Bank, along with the accompanying documentation. They will consolidate the PforR progress reports to be sent to MFB through the SGs for submission to the SC, which will take final decisions on implementation progress and related disbursements. The TCTs will take charge of the SC Secretariat (prepare its sessions and minutes of meetings). They will also commission periodic quality audits to support DLI verification.

59. **All entities involved in the Program will assess their needs for technical assistance and designate technical focal points as counterparts to the TCTs.** During preparation and appraisal, an assessment has been made regarding the needs for Technical Assistance (TA) at all levels to strengthen the capacity of implementing entities starting with MAER and MEPA. The assessment has determined that these entities displayed important weaknesses that needed to be addressed, particularly regarding the skills and capacity of the Program focal points who will contribute to M&E activities with respect to their own Program responsibilities. Required training will be provided through the Program. The training will cover *inter alia* the DLIs, data collection and reporting procedures, verification of data quality and accuracy, report formats, and the M&E work plan.

B. RESULTS MONITORING AND EVALUATION

60. **Key Performance Indicators (KPIs) and DLIs.** The achievement of targets specified in the KPIs under the RF, as well as the DLIs, will be verified by the two TCTs. The DLIs will also be verified by independent entities according to procedures to be discussed with the WBG. Each DLI has objectives with specific deadlines and associated levels of achievement, spread over the Program period of five years. Two verification cycles per year are envisaged.

61. **Baseline assessment.** A baseline assessment carried out in the intervention zones will provide reference data for the performance targets in the RF, which may be revisited as required. For each implementation zone, the baseline assessment will review the methodology to be used and the targets to be achieved. The baseline reports will be shared at the national level by the TCTs of MAER and MEPA and will be used to establish Program work plans and monitoring systems. Results will be monitored regularly at the overall and intermediate goal levels. The TCTs, in collaboration with ministry departments at the central level and with the regional agriculture (DRDRs) and Livestock Departments (DIRELs), will be responsible for monitoring activities and results in the targeted regions and for presenting the consolidated reports. The results will be shared by the TCTs with the implementing entities. The TCTs will facilitate and coordinate subsequent meetings with stakeholders to review progress against the defined objectives. The TCTs, in liaison with staff of technical departments, will be responsible for ensuring effective communication and information sharing with other stakeholders involved in implementing the Program. At the regional level, the DRDRs and DIRELs, each within their individual role, will be responsible for periodic field visits and M&E activities in their respective areas. The DRDRs and DIRELs will also be



responsible for consolidating the results of the field work and reporting to the central TCTs. Consolidated quarterly, half-yearly, and annual reports on performance indicators will be prepared in accordance with the reporting format to be defined in the program's M&E Manual. This manual will establish roles and responsibilities for data collection, analysis, reporting, and dissemination. A report will be prepared for each intervention area related to individual DLIs.

62. **Mid-Term Evaluation.** A Mid-Term Review (MTR) will be organized at the beginning of Year 3 of Program implementation. The MTR will be led by the WB in coordination with MAER and MEPA. It will mobilize the Department of Agricultural Analysis, Forecasting, and Statistics (DAPSA) for data collection and analysis. DAPSA regularly publishes agricultural statistics and has the skills to carry out this task, but, as necessary, it may call on external expertise. The MTR will be fully participatory, mobilizing staff of affiliated entities in collaboration with experts from the WBG.

63. **Final Implementation Evaluation.** A final evaluation will be done three months before the Program ends. This assessment, which is to be conducted by an independent entity, will determine the final levels of the performance indicators and use the baseline and mid-term evaluations to ascertain the extent of progress toward the performance indicators. The final evaluation will mobilize all the implementing entities to provide information on the level of achievement of their respective targets. They will also highlight possible achievement gaps, which will contribute to analyzing those gaps and drawing lessons learned in the course of implementation. The final evaluation report will be available at least 15 days before the official closing of the program.

64. **Independent verification.** Throughout implementation, DLIs will be verified by the IVA. The IVA will prepare DLIs assurance reports in compliance with the verification procedures and methodology with a detailed description of the activities undertaken to verify the accuracy of the results as stated by the implementing entities regarding all the key indicators as well as the recommended disbursement levels for each. It will highlight any significant variance between reported and verified results and present the explanations for those variances. The IVA will critically analyze the reasons explaining why the achievement of certain objectives target may be higher or lower than the targets and analyze the main obstacles and constraints that may have impeded progress and recommend possible solutions for achieving the agreed targets. The IVA will present its findings to MFB, MAER, MEPA and MCPME authorities, development partners, and the WBG at ad hoc monitoring meetings. The World Bank will make a final decision based on the desk review or field mission to collect additional information needed to make an informed decision to authorize disbursement based on DLIs.

65. **M&E Manual.** The Program will set up and validate a manual for M&E within the first three months of effectiveness. The M&E Manual will be prepared by a technical team set up jointly by MAER and MEPA staff. The team will discuss arrangements for collecting, analyzing, reporting, and disseminating Program data. As necessary, it will be supported by external resources, including IFAD's resources.

C. DISBURSEMENT ARRANGEMENTS

66. **Disbursement of the World Bank credit proceeds will be made at the request of the Borrower upon achievement of proposed DLI results.** Most DLIs are scalable, allowing related disbursements to be proportional to progress toward the target DLI value. DLI #10 is not scalable, as the indicator relates to



the establishment of appropriate M&E systems at MAER and MEPA. Hence disbursement will be authorized once these M&E systems are in place and operational. For results that are not achieved or are partially achieved by the due date in a given year, the allocated amount outstanding will be carried over to subsequent years. The specific amounts to be disbursed against achieved and verified results will be determined in accordance with formulas provided in Annex 3.

67. **Advances.** An advance up to 25 percent of the amount of the financing may be requested by the Borrower once the Program becomes effective to facilitate the achievement of DLI results. The advance that shall be justified by the Borrower may be necessary to support the batch of activities under the Results Areas. This advance should be available throughout Program implementation on a revolving basis. The Borrower shall provide the rationale for the advance, activities to be financed through the advance and the estimated cost. The World Bank Task Team will assess the relevance of the request and propose a decision for the Country Director's approval. Once the DLIs have been achieved and approved by the World Bank Task Team, the advance will be deducted, and the balance paid to the Borrower. In case of pending advances at project closure, the Borrower will refund said amount of advance to the World Bank. The Borrower has indicated its intention to request the full advance upon effectiveness.

D. CAPACITY BUILDING AND INSTITUTIONAL STRENGTHENING

68. **Substantial capacity building and institutional strengthening activities are incorporated into the Program design to accelerate the implementation of the related key reforms and investments.** MAER and MEPA will benefit from major efforts to build their capacity to coordinate, manage, monitor, and evaluate Program implementation, and strengthen the M&E systems they use to track achievements under the Results Areas. The establishment of an integrated financial management system for the DAGEs within MAER and MEPA will be a critical activity in strengthening the ministries' overall capacity in financial management and their ability to monitor and report on Program activities. Other activities that will strengthen the capacity to implement the Program include specialized training, improved management systems (such as using the National Registry to target subsidies), and upgrades of existing facilities (such as laboratories) as required. Selected participating entities will benefit as well from efforts that strengthen their capacity to carry out their mandated activities under the Program. Indicators related to capacity building have been included when relevant in the DLIs and Results Framework, as well as in the PAP.

69. **Specific Technical Assistance is also built into the Program design to support the Program technical coordination.** IFAD has committed funds under its ongoing Agriculture Development and Rural Enterprise Support Program phase 2 (PADAER 2), Agriculture Value Chain Support Project, Extension Phase / Agricultural Value Chain Resilience Support Project (PAFA-E/PARFA) and Agri Jeunes projects to finance the TCTs and additional TA as required. TCT staff will be appointed or recruited under terms of reference reflecting the expertise required and mobilized in the first year of Program implementation.

IV. ASSESSMENT SUMMARY

A. TECHNICAL

70. **PforR interventions support priority activities of PRACAS II and PNDE.** The PforR technical design builds on the interventions and achievements of PRACAS I and PNDE, as well as smallholder-focused



programs such as the National Agricultural Insertion and Development Agency (ANIDA) of MAER, the Small-Scale Local Irrigation Support Project (PAPIL), the livestock development programs of MEPA, and lessons from previous and current operations supported by the WBG in Senegal and globally. It aims also at scaling up the CSA interventions developed under the WAAPP to improve climate adaptation. WAAPP was instrumental in developing Senegalese research capacity in CSA and has a number of ready-to-use technologies from within the country and across the region.

71. The PforR draws on lessons from agribusiness-oriented projects and other Bank-supported projects, as well as other PforRs in the Africa Region. The design for the proposed Program draws in particular on: (i) projects that played a critical role in revamping Senegal's horticultural exports: the Agricultural Markets and Agribusiness Development Project (PDMAS, P083609), and the Sustainable and Inclusive Agribusiness Project (PDIDAS, P124018); (ii) the regional Sahel Irrigation Initiative Support Project (SIIP, P154482); and the Sahel Pastoralism Support Project (PRAPS, P147674). The overall design of the Program benefits also from recent Bank experience with PforRs in the agricultural sector in the Africa Region, in particular with Rwanda's Transformation of Agriculture Sector PforR (TASP4, P161876), and Morocco's Strengthening Agricultural Value Chains PforR (P158346).

72. Program expenditure framework. The Government's planned line expenditures for results areas supported by the Program amount to US\$210 million for the five-year period stemming from 2021 to 2025. A significant part of the program expenditures (equivalent to US\$150 million) is financed by IDA and USD\$60 million by the Government. PRACAS II and PNDE total estimated cost is US\$700 million.

Table 5: Program Expenditure Framework

Result Area	Total expenditure PRACAS II and PNDE			
	Total Programs Expenditures related to the PforR A=(B+C) US\$	B GoS funding of the Programs PRACAS II and PNDE, US\$	C World Bank (IDA) funding to the Programs, US\$	Total cost of PRACAS II and PNDE US\$
Result Area 1	138,400,000	46,239,316	92,160,684	400,000,000
Result Area 2	53,394,872	11,965,812	41,429,060	200,000,000
Result Area 3	18,205,128	1,794,872	16,410,256	100,000,000
Total	210,000,000	60,000,000	150,000,000	700,000,000

73. The realism of the program's medium-term expenditures framework (MTEF) and budget has improved but performance is still moderate. The MAER and MEPA 2020-2022 MTEF are globally aligned with the sectoral strategies such as PRACAS II, PNDE and Sectoral Policy Letters. While PRACAS II and PNDE have been validated at the national level, Government approval is ongoing. The official approval is expected during the third Quarter of the year 2020 and is more or less an administrative process which does not impair the Government's commitment and ownership to implement these two programs as demonstrated by the allocation of multiyear budgetary resources via the sectoral MTEF (2020-2022). The Covid-19 crisis is not going to affect the approval timeline. During the past two years, the comparison of the initially approved agriculture budget versus revised budget indicated a noteworthy variation (-4 percent in 2017 and +27 percent in 2018 due to increase in subsidies to the sector). In addition, the budget



performance decreased slightly in 2018 and stood at 91.44 percent in 2018 compared to 97.65 percent in 2017. For livestock, the variation between the initially approved and revised budget was marginal in 2017 (0.6 percent) and 2018 (-2.7 percent) while the budget execution performance has improved from 77.27 percent in 2017 to 100 percent in 2018. The above highlights the need to further enhance the credibility of the budget in the sectors. Analysis suggests multiple underlining factors such as inadequate costing, shortcomings in procurement planning and implementation, changes in priorities, and lack of planning capacity for complex project. The program embeds actions to further enhance the realism of the sector multiyear expenditures plan such as (i) Government's commitment via the Steering Committee to allocate resources consistent to the delivery of tangible results during the five years of the Program as reflected in the Program expenditure framework and (ii) initially approved program budget not to deviate +/-3 percent to comply with best international practice.

74. **Sector investment expenditures are still significantly dependent on external financing, thus making critical sectors like agriculture and livestock vulnerable to the unpredictability of external financing.** For instance, MEPA 2018 investment program was financed at 66 percent via external financing and a significant portion of the program expenditures are dependent on the World Bank financing (71.4 percent). Better prioritization of domestic funding to the agriculture sector is needed to ensure sustainability and effective implementation of the PRACAS II and PNDE. The Government developed a new domestic revenue mobilization strategy to further enhance domestic revenue mobilization in order to achieve in the medium term a tax to GDP ratio of 20 percent. The implementation of this new strategy with the support of the World Bank and other development partners is expected to create more fiscal space needed to increase budget allocation to the agriculture and livestock sectors.

75. **The program is not expected to have an impact on the country fiscal outlook which remains favorable** if the country adheres to the West Africa Economic and Monetary Union (WAEMU) convergency criteria of a fiscal deficit target of 3 percent of GDP and continues to improve public expenditure efficiency to maintain public debt at sustainable levels (debt to GDP ratio is 46 percent). Recent measures aiming at a better rationalization of public administration recurrent costs such as restriction on vehicle procurement is a good policy measure that should be effectively implemented and sustained.

76. **The variation in the investment budget execution suggests effectiveness and efficiency gaps.** Cases of agriculture equipment bought (tractor and other material) without an adequate need analysis and expression, and absence of proper maintenance cost planning are selected examples which could impede the achievement of the program results and impact the beneficiaries. In addition, the massive investment in the groundnut value chain during the period 2013-2015 did not necessarily result in an increased yield. For instance, while 137 billion CFA (US\$224 million) was spent over the period, it does not coincide with an increase in yields (-151 kg / hectare) and production (-236,813 tons). The efficiency gap will be thoroughly analyzed during the Program implementation via a Public Expenditure Review to inform corrective policy.

B. ECONOMIC

77. **Rationale for public intervention.** The proposed Program aims at strengthening the provision of key public goods to improve the competitiveness of the groundnut subsector (such as productive and



market infrastructure, R&D, agricultural extension, quality management, sustainable use of agricultural resources) and to encourage diversification by small-scale farmers into other crops and small livestock, including agribusiness opportunities for youth and women. The Program will address a number of market and policy failures affecting performance in these subsectors, such as the allocation of subsidies for low-quality seed, quasi monopolies for aggregators of groundnuts, inadequate targeting of small producers, the absence of incentives to adopt improved seed and more sustainable practices, and limited access to finance.

78. **World Bank value added.** World Bank support is expected to improve the efficiency and targeting of activities supported under the Program, which will ultimately increase the Program's economic benefits and inclusiveness, help to reduce poverty, expand diversification, and reduce agricultural risk. The World Bank has global expertise in designing and implementing programs in the agricultural sector that address market failures through policy measures. The PforR will focus on implementing a set of reforms in input supply subsidies to the groundnut, other crops, and livestock sectors; strengthening institutions in the sector; and targeting public investments to improve competitiveness and diversification.

79. **Benefits streams.** Program activities are expected to generate several benefit streams. Firstly, farmers' revenues will increase due to higher groundnut and diversification crop yields, expansion of more profitable production systems (i.e.; poultry, small livestock and dairy production), broader adoption of certified seeds, access to fertilizer, enhanced resilience to climate variability and change, along with intangible social benefits such as improved food and nutrition security, human capital strengthening and youth/ women empowerment. The main channel for the realization of these benefits streams is through Results Area 1. Secondly, Results Area 2 will ensure that marketing chains function more efficiently, contributing to lower price volatility and higher farmgate prices, along with access to financial services and insurance. Results Area 3 is expected to generate the necessary framework for successful program implementation through institutional strengthening. The proposed policy measures would be essential to create a more enabling environment, increase the performance of value chains and more efficient targeting of public support to smallholders.

80. In order to assess the financial performance of the proposed production technologies, as well as the impact of policy measures, a number of crops, livestock and processing enterprise models have been prepared, with costs and benefits computed using prevailing market prices in the with and without program situation. All financial models were found to be financially viable based on the estimated benefit/cost ratio (B/C), Net Present Value (NPV) and Internal Rate of Return (IRR)¹⁴. The impact of the policy measures is captured through higher producer prices, better quality seeds and measures to promote soil fertility, all reflected by higher yields.

81. **Economic evaluation.** The economic analysis followed a similar approach but using economic prices and aggregating the results at the program level and from the society viewpoint. The economic benefits of the Program were estimated using the economic benefits of the models, against the economic

¹⁴ The analysis also benefited from a recent study financed by the World Bank entitled *Groundnut Value Chain Competitiveness and Prospects for Development. Final Report. June 2017*.



program costs and including adoption and phasing out rates. The analysis was developed over 15 years. The NPV of the Program is estimated to be US\$336 million, and the Economic Rate of Return (ERR) is expected to be 24.1 percent. Sensitivity analysis shows that the baseline results are robust under most scenarios. The robustness of these results was explored by testing the effects of changes in several critical parameters: (i) reduced program benefits; (ii) increased program costs; (iii) delayed program benefits; (iv) decreased output prices; (v) increased input prices; and (vi) reduced adoption rate.

C. FIDUCIARY

82. The fiduciary assessment reviewed the capacity of key implementing entities (MAER and MEPA) to: (i) plan, record, control, and manage all Program resources and produce timely, reliable information for stakeholders to monitor progress and make decisions; (ii) follow and monitor procurement rules and procedures, capacity, and procurement risks associated with the Program; and (iii) ensure that implementation arrangements are adequate and fiduciary risks are reasonably mitigated..

83. The review concludes that: (i) the fiduciary risk is High and (ii) the fiduciary arrangements complied with the World Bank Policy and Directives on PforR and provide reasonable assurance that the proceeds of the financing will be used in an economical, effective, and efficient manner for the attainment of the program development objectives. No high-value contract with a value exceeding the Operational Procurement Review Committee (OPRC) threshold is identified under the program procurement plan.

84. The implementing entities' Public Financial Management (PFM) system has been strengthened through series of reforms aiming at enhancing the regulatory and institutional framework, and the integrated financial management information system. In line with the WAEMU Directive 06/2009/CM/Uemoa, dated June 26, 2009, Senegal issued a new organic Law (PFM organic Law n° 2020-07 of February 26, 2020) to strengthen the institutional framework for public financial management (PFM), moving to the budget program which requires performance-based allocation of budget and the decentralization of commitment authority to line ministries. These reforms have been delayed and are expected to be effectively implemented in 2020. The new legal framework enables a more results-oriented approach in budget planning and execution. This comprehensive reform is expected to lead to: (i) the preparation of more realistic and sustainable multiyear budget forecast by programs; (ii) an adequate allocation of expenditures based on performance objectives, (iii) increased accountability of the principal commitment authorizers (line ministers and heads of other institution); (iv) effective supervision by Parliament of the execution of budget laws fostered by budget performance projects and reports by programs and ministries; and (v) ex-post controls to assess the effectiveness of management and performance. An Integrated Financial Management Information System (IFMIS) has been designed expressly to enable the implementation of the program-based budget approach within line ministries.

85. However, the policy alignment and lack of a realistic budget are still areas of shortcomings which result in unpredictable budget cuts, low budget execution performance or inadequate budget allocation to achieve the policy objectives. In addition, unreliable procurement planning and weak contract management, an ineffective internal audit function characterized by significant turnover, and delayed cash release and payment are the main areas of concerns and risks to be addressed through a strong but selective Program Action Plan (PAP) and the mitigation measures detailed below.



86. The main mitigating measures and program action plan to address the fiduciary risks include, (i) agreement on the multiyear program expenditures framework agreement with the Government, (ii) limit the program expenditures framework annual budget deviance to +3 percent, (iii) appoint the Program Managers and fill vacant Internal Inspection position, (iv) open a separate and dedicated account at the National Treasury to receive funds that will flow from the World Bank, (v) National Treasury to appoint dedicated accountants to handle and report on payments made at the request of the line ministries on the dedicated account, (vi) roll out and effective use of the IFMIS and eProcurement system, and (vii) develop a contract agreement framework.

D. ENVIRONMENTAL AND SOCIAL

87. The challenges associated with the agricultural sector range from poor agricultural practices such as poor-quality seeds, inefficient use of water, fertilizers and pesticides to the lack of infrastructure and technology needed to diversify and improve agricultural and livestock productivity. In addition, soil degradation, extreme weather conditions and limited access to qualified advisory services are compounding the problem. An Environment and Social Systems Assessment (ESSA) was prepared to assess Senegal's authority and organizational capacity to achieve environmental and social objectives against the range of environmental and social impacts that may be associated with the proposed Program. This assessment was undertaken against a set of core principles set out in the Operational Policy on Program for Results Financing (OP/BP 9.00). The ESSA highlights the areas where the management system lacks the regulatory authority or organizational capacity to effectively manage environmental or social effects and proposes several actions for inclusion in the Program Action Plan to enhance environmental and social management and increase sustainability and impact.

88. **Environmental Risks and Impacts.** The environmental issues associated with the Program are related to the potential increase of water, fertilizer and pesticide use resulting from the intensification of the targeted value chains (groundnuts, horticultural crops and milk production). As designed, the Program represents a positive response to these environmental issues as it promotes the use of certified seeds, the efficient use of water and agricultural inputs, enhancement of pasture management and improved land management practices. It also supports the adoption of CSA. The support to the irrigation sector focuses on improving water management by small-scale farmers. This has multiple benefits in the form of more productive and efficient use of water, decreased salinity, improved crop yields, and increased farm income. The ESSA found that the applicable Environmental and Social Management systems in Senegal are generally appropriate and comprehensive. The systems are in many respects consistent with the principles and attributes of a well-functioning system as defined by the core principles set out in the PforR Policy. However, the institutions, processes and procedures at the national and regional levels often lack the human, material and financial resources to operate effectively. Hence the environmental and social management system is in place but its implementation in practice is often less than effective.

89. **Social Risks and Impacts.** In terms of information, public consultations and grievance management, the mechanisms set up for citizen participation at the local level, are moderately effective. In terms of social management, there are many similarities between the national legal framework and World Bank policies and procedures. However, Senegalese law is more restrictive in that it focuses on the



holders of formal rights, while the World Bank policy does not make this distinction and includes people without formal rights or title to the land that they occupy. World Bank policy does not only consider official owners, but also customary owners and those who have no ownership rights to the land they occupy.

90. The ESSA includes a list of the investments that are excluded from financing. This Program is not expected to finance large infrastructure, expansion of agricultural land or any expansion of irrigation networks. The ESSA notes that the promotion of water resource efficiency and increased land productivity is not expected to have substantial downstream impacts in terms of water quantity and quality. However, the intensification of the groundnuts, horticultural crops and livestock value chains may result in increased use of fertilizers and pesticides.

91. **Consultation and disclosure of the ESSA.** The preparation of the ESSA has been carried out in a participatory manner involving feedback and inputs from the key stakeholders working in the private sector, government and non-governmental organizations. The World Bank team collected information relevant to the assessment and conducted field visits to interact with local and regional authorities, the private sector, international organizations and civil society. A first draft ESSA was shared with MAER and MEPA on January 9, 2020. The World Bank sponsored a multi-stakeholder workshop (from 10 to 12 March 2020 in *Kaolack, Diourbel and Louga*). Participants included a range of stakeholders from government, international organizations, academia, private sector, local government and civil society. The ESSA reflected concerns raised by incorporating suggestions both within the text of ESSA itself as well as in the more substantive recommendation and proposed actions. However, given the outbreak of COVID-19 and due to the decisions taken by the Senegalese authorities to restrict travel in the country, the World Bank and Government team decided to conduct the consultation in a virtual manner. The ESSA was also published on the website of the Ministry of Agriculture in order to disseminate it widely. The final version of the ESSA has incorporated the concerns of all the above-mentioned stakeholders who have been represented in the various consultations conducted at the national and regional levels. It has been published on MAER and MEPA websites on April 10, 2020 and disclosed on the World Bank external site on April 21, 2020.

92. **Proposed Actions.** The proposed Program can be used strategically to strengthen Senegal's Environmental and Social Management Systems by reinforcing the human, financial and logistical capacities of the key institutions to promote best practices, provide quality assurance and monitor for compliance. Beyond limitations in human resources, these institutions lack a comprehensive guide on environmental and social management of local investments. The Program should invest in training technical, extension specialists and farmers in integrated soil fertility, pest and crop management for long term environmental sustainability. To improve implementation capacity, the Program will conduct training in environmental risk management for the relevant departments and ensure that projects and subprojects that are subjected to the Environmental Impact Assessment (EIA) procedures are adequately screened and their potential risks are managed through an Environmental and Social Management Framework. For efficient use of agricultural inputs and monitoring related environmental impacts and food safety, the program should establish baselines for fertilizer and pesticide use and adopt an integrated approach to soil fertility and crop/pest management.



93. **WB's Grievance Redress Service (GRS).** Communities and individuals who believe that they are adversely affected as a result of a Bank supported PforR operation, as defined by the applicable policy and procedures, may submit complaints to the existing program grievance redress mechanism or the WB's GRS. The GRS ensures that complaints received are promptly reviewed in order to address pertinent concerns. Affected communities and individuals may submit their complaint to the WB's independent Inspection Panel which determines whether harm occurred, or could occur, as a result of WB non-compliance with its policies and procedures. Complaints may be submitted at any time after concerns have been brought directly to the World Bank's attention, and Bank Management has been given an opportunity to respond. For information on how to submit complaints to the World Bank's corporate Grievance Redress Service (GRS), please visit <http://www.worldbank.org/GRS>. For information on how to submit complaints to the World Bank Inspection Panel, please visit <http://www.inspectionpanel.org>.

E. RISK ASSESSMENT

94. The overall risk for the proposed Program is *Substantial*, driven by political and governance issues, sector strategies and policies, technical design, institutional capacity for implementation and sustainability, environment and social, stakeholders, fiduciary risks and the uncertainty resulting from COVID-19 which is overarching.

95. **The political and governance issues risk is assessed substantial** and relates to the implementation of key policy reforms to foster development of the groundnut and livestock value chains. Lack of political will, resistance from vested interests, and well-grounded practices in the administration may hinder the implementation of reforms. Continuous support for these key Program elements through the WBG policy dialogue with the GoS will help mitigate this risk.

96. **The sector strategies and policies risk is substantial and also relates to the implementation of key reforms as discussed above.** The fact that this operation supports the national sectoral strategy will help moderate the risk to sector strategies. The instrument used—the PforR—is also designed to ensure full ownership by the Government. The DLIs will be linked to the implementation of the selected critical sector reforms, providing a strong incentive for their implementation.

97. **The institutional capacity for implementation and sustainability risk is substantial reflecting the need for strong collaboration between the entities involved in Program implementation.** This risk will be mitigated by establishing dedicated TCTs within MAER and MEPA to ensure coordination among implementing agencies, and through capacity building activities incorporated into the Program design, the DLIs, and the PAP. A Steering Committee headed by the Ministry of Finance will ensure the overall coordination and play a major role in ensuring smooth coordination of the Program with all stakeholders.

98. **The stakeholder risk is substantial** reflecting the difficulties that may arise from stakeholders in the implementation of key policy reforms needed to favor agricultural development, in the groundnut value chain in particular. This risk will be mitigated by supporting and fostering the dialogue between various stakeholders of the value-chain, through the reform of the groundnut inter-profession and establishing partnerships amongst actors.



99. **The technical design is assessed substantial as this Program is the first PforR for these two sectors and its design is quite different from a classic investment project financing (IPF).** This risk will be mitigated as the PforR will be supporting part of their own sectorial programs and using existing operating systems. As needed, capacity will be strengthened.

100. **Another major risk for this operation lies in the area of fiduciary management rated high.** Overall, the PFM system in Senegal face many challenges. Nevertheless, Senegal has embarked on major reforms to strengthen the institutional framework for PFM and shift toward performance-based budgeting, decentralizing budget programs and commitment authority to line ministries. To mitigate fiduciary risk at the Program level, efforts to strengthen the fiduciary capacity of the executing agencies are an integral part of the Program design.

101. **Environmental and social risks are assessed as substantial.** Although the investments that will be funded by the Program are unlikely to have substantial adverse impacts, the cumulative impact of the intensification of groundnuts, livestock and horticultural production paired with the weak implementation of environment and social management systems at national and regional levels raises the risk classification to substantial. The Program design and the measures in the PAP mitigate many of these risks.

102. **The agricultural season is about to begin in the Sahel region and Senegal is working to ensure that a food crisis does not aggravate an extremely precarious health situation caused by COVID 19 in the coming months.** The activities planned under the Program are expected to increase agricultural productivity, create jobs in rural areas, and improve overall food security in the country. The PforR will support GoS to repurpose its agricultural and livestock policies and support programs to make them more effective to build resilient and competitive food systems, strengthen disease surveillance, control programs and outbreak containment plans and finally improve biosecurity in food and animal productions and trade.

F. PROGRAM ACTION PLAN

103. **Based on the risk assessment, the PAP includes actions aimed at strengthening the capacity of implementing agencies in four areas: Program management, fiduciary systems, environmental and social management, and Program M&E.** The PAP focuses on mitigating the most substantial risks identified with regard to Program implementation, which are: (i) inter-agency coordination and staff resources at MAER and MEPA to coordinate, manage, monitor, and evaluate the Program; and (ii) weaknesses identified in the fiduciary systems and risks associated with the number of Program implementing entities. Details are provided in the description of the PAP in Annex 5.



ANNEX 1. RESULTS FRAMEWORK MATRIX

Results Framework
COUNTRY: Senegal
AGRICULTURE AND LIVESTOCK COMPETITIVENESS PROGRAM FOR RESULTS

Program Development Objective(s)

The Program Development Objective is to enhance productivity and market access of priority commodity value chains and livestock, in the Extended Groundnut Basin and Agro-pastoral Areas.

Program Development Objective Indicators by Objectives/Outcomes

Indicator Name	DLI	Baseline	Intermediate Targets					End Target
			1	2	3	4	5	
Enhance productivity and market access of priority commodity value chains and livestock								
Yield increase of groundnut (Metric ton)		0.98	1.00	1.00	1.10	1.20	1.30	1.50
Increase exports of shelled groundnuts (Metric ton)		215,000.00	230,000.00	255,000.00	280,000.00	315,000.00		350,000.00



Indicator Name	DLI	Baseline	Intermediate Targets					End Target
			1	2	3	4	5	
Decrease in mortality rate of small ruminants (Percentage)		0.00	0.00		8.00			15.00
Increase in dairy farms productivity (Percentage)		0.00	0.00	5.00	10.00	15.00		20.00
Increase in volume of milk commercialized (Liters (Million))		270,000.00	280,000.00	295,000.00	310,000.00	325,000.00		340,000.00
Farmers reached with agricultural assets or services (CRI, Number)		0.00	50,000.00	100,000.00	200,000.00	230,000.00		250,000.00
Farmers reached with agricultural assets or services - Female (CRI, Number)		0.00						100,000.00



Intermediate Results Indicator by Results Areas

Indicator Name	DLI	Baseline	Intermediate Targets				End Target
			1	2	3	4	
Improved Crop and Livestock Productivity and Resilience							
Quantities of certified groundnut seed acquired annually (Metric ton)	DLI 1	40.00	56.00	72.00	88.00	104.00	120.00
Cumulative quantity of certified seeds acquired for diversification crops (Metric ton)	DLI 2	0.00	10.60	21.20	31.80	42.40	53.00
Percentage of subsidy targeted to small producers and climate-smart technologies (Percentage)	DLI 3	40.00	50.00	60.00	70.00	80.00	90.00
Farmers adopting improved agricultural technology (CRI, Number)		0.00	30,000.00	70,000.00	100,000.00	130,000.00	150,000.00
Farmers adopting improved agricultural technology - Female (CRI, Number)		0.00					60,000.00
Vaccination coverage rates for small ruminant plague (PPR) (Percentage)	DLI 4	30.00	40.00	50.00	60.00	70.00	80.00
Strategy for the control of Newcastle Disease and fowlpox established and validated (Yes/No)		No	No	No	Yes	Yes	Yes



Indicator Name	DLI	Baseline	Intermediate Targets				End Target
			1	2	3	4	
Cumulative quantity of fodder certified seeds acquired by the producers (Metric ton)	DLI 5	0.00	0.00	0.00	100.00	200.00	300.00
Surface area producing fodder with certified seeds (Hectare(Ha))		0.00	0.00	0.00	5,000.00	10,000.00	15,000.00
National Genetic Improvement Strategy & Plan developed and validated (Yes/No)		No	No	No	Yes	Yes	Yes
Livestock husbandry guidelines (housing and management best practices) developed and disseminated (Yes/No)		No	No	No	Yes	Yes	Yes
Improved Business Environment and Market Integration							
Groundnut interprofession (Cニア) restructured (new action plan and framework agreement with government) (Text)	DLI 6	No existing action plan to restructure the National Committee on the Groundnut Value chain (Cニア)		Cニア restructured with an action plan to be autonomous, in an acceptable way to the WB	Framework agreement is signed between Cニア and the Government, encompassing new price setting mechanism for groundnut	Action plan is implemented	Groundnut interprofession (Cニア) restructured (new action plan and framework agreement with government)
Level of groundnut production under contract farming agreements (Percentage)		0.00	5.00	10.00	15.00	20.00	30.00
Number of producers with access to agriculture insurance for crops and livestock (Number)	DLI 7	269,000.00	292,000.00	319,000.00	346,000.00	373,000.00	400,000.00
of which women (Number)		80,000.00	87,000.00	96,000.00	104,000.00	112,000.00	120,000.00



Indicator Name	DLI	Baseline	Intermediate Targets				End Target
			1	2	3	4	
Operationalization of the WRS in the Extended Groundnut Basin (Text)	DLI 8	The WRS regulatory body (OSRE) has not been implemented	ORSRE's key personnel has been appointed or recruited, and ORSRE has been provided with its own approved budget	10 warehouses meet ORSRE's licensing requirements allowing warehouse operators to issue warehouse receipts, from a baseline of 0	US\$ 10,000,000 financed by financial institutions through warehouse receipts, from a baseline of US\$ 0		The WRS is operational in the extended groundnut basin and facilitating access to credit
Warehouses in the groundnut basin licensed by the Warehouse Receipt System regulatory body (ORSRE) (Number)		0.00					10.00
Number of milk collection centers supported and/or equipped and operational (Number)	DLI 9	12.00	27.00	42.00	57.00	72.00	72.00
Improved Sector Governance, Coordination and Program Management							
Monitoring and evaluation system for agriculture and livestock performance (Text)	DLI 10	Draft Monitoring and Evaluation system at MAER and MEPA		Adequate monitoring and evaluation systems in place and operating in MAER and MEPA to track Program performance			Monitoring and evaluation system for agriculture and livestock performance
Application of DECRET n° 2008-1260 (Nov. 10, 2008, concerning recognition, organization and functioning of the Interprofessional Organizations in the Agricultural sector (OIA).		No					Yes



Indicator Name	DLI	Baseline	Intermediate Targets				End Target
			1	2	3	4	
(Yes/No)							
Regional Committees on Agricultural Framework Law are functionning (CROASP) (Yes/No)	No	No	Yes	Yes	Yes	Yes	Yes
Animal Health and Veterinary Public Health Code finalized and validated (Yes/No)	No	No	Yes	Yes	Yes	Yes	Yes
Livestock Master Plan developed (Yes/No)	No	No	No	No	Yes	Yes	Yes
Share of targeted beneficiaries (total and female) with rating 'satisfied' or above on project interventions/support (survey) (Percentage)	0.00						85.00

**Monitoring & Evaluation Plan: PDO Indicators**

Indicator Name	Definition/Description	Frequency	Datasource	Methodology for Data Collection	Responsibility for Data Collection
Yield increase of groundnut	Increase in average yield of groundnut	annual	MAER DA	Physical measurement of yield per hectare	M&E
Increase exports of shelled groundnuts	Volume of shelled groundnuts exported	semester	DA MAER	Registry from groundnut exports and customs	M&E
Decrease in mortality rate of small ruminants	Percentage of decrease in mortality rate of small ruminants compared to baseline	every 2 years	MEPA	surveys nationwide	M&E
Increase in dairy farms productivity	Quantity of milk produced per year/number of cows in age of producing milk	annual	MEPA	Surveys in beneficiaries of the dairy value chain program	M&E
Increase in volume of milk commercialized	Increase in volume of milk commercialized from collecting centers	annual	Milk centers, MEPA	Registry from milk centers supported by the Project	M&E
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	annual	M&E collection system	Registration of beneficiaries in a data collection system	TCT M&E



"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					



Monitoring & Evaluation Plan: Intermediate Results Indicators					
Indicator Name	Definition/Description	Frequency	Datasource	Methodology for Data Collection	Responsibility for Data Collection
Quantities of certified groundnut seed acquired annually	Quantities of certified groundnut foundation seeds acquired annually	annual	ISRA		M&E, ISRA
Cumulative quantity of certified seeds acquired for diversification crops	Cumulative quantity of certified seeds acquired for diversification crops	annual	ISRA, MAER		
Percentage of subsidy targeted to small producers and climate-smart technologies	Percentage of subsidy targeted to small producers (<5ha) and climate-smart technologies (seeds, fertilizer, equipment) (% of subsidy amount)	annual	MAER DA, ANCAR		
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,	every 6 months	M&E system		



	<p>agroforestry, timber and non-timber forest products.</p> <p>Adoption refers to a change of practice or change in use of a technology that was introduced or promoted by the project.</p> <p>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,</p>				
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	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					
Vaccination coverage rates for small ruminant plague (PPR)	Vaccination coverage rates for small ruminant plague (PPR)	Annually	Annual report		M&E, DAPS
Strategy for the control of Newcastle Disease and fowlpox established and validated		annual	MEPA		
Cumulative quantity of fodder certified seeds acquired by the producers		annual	MEPA	Annual Inspection based on traceability of certified foundation seeds produced by ISRA	
Surface area producing fodder with certified seeds	Surface area producing fodder with selected seeds	annual	MEPA	Annual Survey in producers having acquired certified seeds.	
National Genetic Improvement Strategy &		annual	MEPA		



Plan developed and validated					
Livestock husbandry guidelines (housing and management best practices) developed and disseminated		annual	MEPA		
Groundnut interprofession (Cニア) restructured (new action plan and framework agreement with government)	Groundnut interprofession (Cニア) restructured (new action plan and framework agreement with government)	annual	MAER DA, Cニア		
Level of groundnut production under contract farming agreements		annual		survey	
Number of producers with access to agriculture insurance for crops and livestock	Number of producers with access to agriculture insurance for crops and livestock	Annually	CNAAS		M&E, CNAAS
of which women					
Operationalization of the WRS in the Extended Groundnut Basin	The WRS is operational in the extended groundnut basin and facilitating access to credit	annual	Ministry of Commerce, OSRE		
Warehouses in the groundnut basin licensed by the Warehouse Receipt System regulatory body (ORSRE)					
Number of milk collection centers supported and/or equipped and operational		annual	MEPA	Annual Verification against defined checklist of minimum equipment, functioning and management	



Monitoring and evaluation system for agriculture and livestock performance	Monitoring and evaluation system for agriculture and livestock performance	annual	MAER, MEPA		
Application of DECRET n° 2008-1260 (Nov. 10, 2008, concerning recognition, organization and functioning of the Interprofessional Organizations in the Agricultural sector (OIA).					
Regional Committees on Agricultural Framework Law are functioning (CROASP)					
Animal Health and Veterinary Public Health Code finalized and validated		annual	MEPA	Document validated by MEPA and transferred for Parliament approval	
Livestock Master Plan developed	Master plan developed based on the use of the Livestock Investment and Policy Toolkit (LSIPT)	annual	MEPA		
Share of targeted beneficiaries (total and female) with rating 'satisfied' or above on project interventions/support (survey)					

**ANNEX 2. DLIS, DISBURSEMENT ARRANGEMENTS AND VERIFICATION PROTOCOLS****Groundnut Competitiveness and Agriculture Diversification Program For Results****Disbursement Linked Indicators Matrix**

DLI 1	Quantity of certified groundnut seeds acquired annually			
Type of DLI	Scalability	Unit of Measure	Total Allocated Amount (USD)	As % of Total Financing Amount
Period	Value		Allocated Amount (USD)	Formula
Baseline	40.00			
Year 1	56.00		7,000,000.00	
Year 2	72.00		7,000,000.00	
Year 3	88.00		7,000,000.00	
Year 4	104.00		7,000,000.00	
Year 5	120.00		7,000,000.00	For each additional 16 metric tons



			from the baseline, US\$ 7m
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DLI 2	Cumulative quantity of certified seeds acquired for diversification crops			
Type of DLI	Scalability	Unit of Measure	Total Allocated Amount (USD)	As % of Total Financing Amount
Output	Yes	Metric ton	15,000,000.00	10.00
Period	Value		Allocated Amount (USD)	Formula
Baseline	0.00			
Year 1	10.60		3,000,000.00	
Year 2	21.20		3,000,000.00	
Year 3	31.80		3,000,000.00	
Year 4	42.40		3,000,000.00	
Year 5	53.00		3,000,000.00	For each additional 10.6 metric tons from the baseline, US\$

DLI 3	Percentage of subsidy targeted to small producers and climate-smart technologies			
Type of DLI	Scalability	Unit of Measure	Total Allocated Amount (USD)	As % of Total Financing Amount
Intermediate Outcome	Yes	Percentage	20,000,000.00	3.33
Period	Value		Allocated Amount (USD)	Formula



Baseline	40.00		
Year 1	50.00	4,000,000.00	
Year 2	60.00	4,000,000.00	
Year 3	70.00	4,000,000.00	
Year 4	80.00	4,000,000.00	
Year 5	90.00	4,000,000.00	For each additional 10-percentage-point increase from the baseline

DLI 4 Vaccination coverage rate for small ruminant plague (PPR)				
Type of DLI	Scalability	Unit of Measure	Total Allocated Amount (USD)	As % of Total Financing Amount
Intermediate Outcome	Yes	Percentage	30,000,000.00	20.00
Period	Value		Allocated Amount (USD)	Formula
Baseline	30.00			
Year 1	40.00		6,000,000.00	
Year 2	50.00		6,000,000.00	
Year 3	60.00		6,000,000.00	
Year 4	70.00		6,000,000.00	



Year 5	80.00	6,000,000.00	For each additional 10-percentage-point increase from the ba
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DLI 5 Cumulative quantity of fodder certified seeds acquired by the producers (tons)				
Type of DLI	Scalability	Unit of Measure	Total Allocated Amount (USD)	As % of Total Financing Amount
Intermediate Outcome	Yes	Metric ton	10,000,000.00	6.70
Period	Value		Allocated Amount (USD)	Formula
Baseline	0.00			
Year 1	0.00		0.00	
Year 2	0.00		0.00	
Year 3	100.00		4,000,000.00	US\$ 4million for the first 100 tons
Year 4	200.00		3,000,000.00	US\$ 3 million
Year 5	300.00		3,000,000.00	US\$ 3 million

DLI 6 Groundnut interprofession (Cニア) restructured				
Type of DLI	Scalability	Unit of Measure	Total Allocated Amount (USD)	As % of Total Financing Amount
Output	Yes	Text	10,000,000.00	3.30
Period	Value		Allocated Amount (USD)	Formula



Baseline	No existing action plan to restructure the National Committee on the Groundnut Valuechain (CNIA)		
Year 1		0.00	
Year 2	Restructuring of CNIA to: (i) establish CNIA as an autonomous entity through the adoption by the Recipient of an action plan and approval of a dedicated budget, and (ii) ensure representation of relevant stakeholders within CNIA	4,000,000.00	
Year 3	Signature of a framework agreement between the Recipient and CNIA, rolling out a price-setting mechanism for groundnut	4,000,000.00	
Year 4	CNIA's action plan is implemented	2,000,000.00	
Year 5		0.00	

DLI 7	Number of producers with access to agriculture insurance for crops and livestock			
Type of DLI	Scalability	Unit of Measure	Total Allocated Amount (USD)	As % of Total Financing Amount
Period	Value		Allocated Amount (USD)	Formula
Baseline	269,000 farmers covered with insurance			



Year 1	Insurance premium arrears due by the Recipient to CNAAS cleared entirely	2,000,000.00	
Year 2	321,400 farmers covered	3,200,000.00	
Year 3	347,600 farmers covered	1,600,000.00	
Year 4	373,800 farmers covered	1,600,000.00	
Year 5	400,000 farmers are covered by the insurance scheme	1,600,000.00	For each additional 26,200 farmers and herders covered from

DLI 8	Operationalization of the WRS in the Extended Groundnut Basin			
Type of DLI	Scalability	Unit of Measure	Total Allocated Amount (USD)	As % of Total Financing Amount
Intermediate Outcome	Yes	Text	4,005,000.00	2.67
Period	Value		Allocated Amount (USD)	Formula
Baseline	The WRS regulatory body (ORSE) has not been implemented			
Year 1	ORSRE's key personnel has been appointed or recruited, and ORSRE has been provided with its own approved budget		400,000.00	
Year 2	10 warehouses meet ORSRE's licensing requirements allowing warehouse operators to issue warehouse receipts, from a baseline of 0		805,000.00	



Year 3	US\$ 10,000,000 financed by financial institutions through warehouse receipts, from a baseline of US\$ 0	2,800,000.00	for each additional US\$ 2,500,000 financed by financial inst
Year 4		0.00	
Year 5		0.00	

DLI 9	Number of milk collection centers supported and/or equipped and operational			
Type of DLI	Scalability	Unit of Measure	Total Allocated Amount (USD)	As % of Total Financing Amount
Output	Yes	Number	5,000,000.00	3.33
Period	Value		Allocated Amount (USD)	Formula
Baseline	12.00			
Year 1	27.00		1,250,000.00	
Year 2	42.00		1,250,000.00	
Year 3	57.00		1,250,000.00	
Year 4	72.00		1,250,000.00	
Year 5	72.00		0.00	For each additional 15 milk collection centers supported and



DLI 10	Monitoring and Evaluation (M&E) system each at MAER and MEPA for agriculture and livestock performance in place and functioning			
Type of DLI	Scalability	Unit of Measure	Total Allocated Amount (USD)	As % of Total Financing Amount
Output	No	Text	10,000,000.00	6.70
Period	Value		Allocated Amount (USD)	Formula
Baseline	Draft Monitoring and evaluation system for agriculture and livestock sectors			
Year 1			0.00	
Year 2	Adequate monitoring and evaluation systems in place and operating in each MAER and MEPA to track Program performance		10,000,000.00	US\$ 5 million available for withdrawal per monitoring and ev
Year 3			0.00	
Year 4			0.00	
Year 5			0.00	

**Verification Protocol Table: Disbursement Linked Indicators**

DLI 1	Quantity of certified groundnut seeds acquired annually
Description	Quantities of certified groundnut foundation seeds acquired annually
Data source/ Agency	ISRA, DA/DISEM
Verification Entity	IVA
Procedure	The IVA will review and approve reports prepared by the Program Technical Coordinating Units and carry out site inspections and in-depth reviews

DLI 2	Cumulative quantity of certified seeds acquired for diversification crops
Description	Cumulative quantity of certified seed acquired for diversification crops (fonio, maize, sesame, etc.)
Data source/ Agency	Ministry of Agriculture DA/DISEM, ISRA
Verification Entity	IVA
Procedure	The IVA will review and approve the reports prepared by the Program Technical Coordinating Units (TCUs) and carry out site inspections and in-depth reviews of specific items as required.

DLI 3	Percentage of subsidy targeted to small producers and climate-smart technologies
Description	The Govt. will have to develop and implement a new input (including seed, fertilizer and agriculture equipment) subsidy plan acceptable to the Bank. This strategy will emphasize on targeting on both beneficiaries and the technologies. It will be



	measured by the percentage of the total subsidy that is targeted to small farmers and CSA technologies
Data source/ Agency	Ministry of Agriculture DA, ANCAR
Verification Entity	IVA
Procedure	The IVA will review and approve the reports prepared by the Program Technical Coordinating Units (TCUs) and carry out site inspections and in-depth reviews of specific items as required.

DLI 4	Vaccination coverage rate for small ruminant plague (PPR)
Description	Vaccination coverage rate for small ruminant plague (PPR)
Data source/ Agency	Ministry of livestock Veterinary Service Directorate
Verification Entity	IVA
Procedure	The IVA will review and approve the reports prepared by the Program Technical Coordinating Units (TCUs) and carry out site inspections and in-depth reviews of specific items as required.

DLI 5	Cumulative quantity of fodder certified seeds acquired by the producers (tons)
Description	Cumulative quantity of fodder certified seeds acquired by the producers (tons)
Data source/ Agency	Ministry of Livestock
Verification Entity	IVA
Procedure	The IVA will review and approve the reports prepared by the Program Technical Coordinating Units (TCUs) and carry out site inspections and in-depth reviews of specific items as required.



DLI 6	Groundnut interprofession (Cニア) restructured
Description	The Cニア will be restructured to ensure representation of all stakeholders to be implicated in the price setting mechanism. An action plan to ensure its operationalization will be designed and implemented. Both the Cニア restructuring and action plan will need to be acceptable to the Bank. This DLI comprises three main milestones: (i) Cニア restructured with an action plan ; (ii) agreement framework is signed between Cニア and the Gvt.; (iii) action plan implemented
Data source/ Agency	Ministry of Agriculture DA, Cニア
Verification Entity	IVA
Procedure	The IVA will review and approve the reports prepared by the Program Technical Coordinating Units (TCUs) and carry out site inspections and in-depth reviews of specific items as required.
DLI 7	Number of producers with access to agriculture insurance for crops and livestock
Description	This DLI intends to ensure access to financial services as this is a major bidding constraint. It includes at least two milestones: (i) paying off premium arrears due by the Gvt., which is already engaged in paying it gradually; (ii) ensuring insurance coverage for additional 400,000 farmers. In 2019 about 269,000 were insured with this premium subsidy via IFC-funded program ensuring phasing out of insurance premium subsidizing by the GoS. This DLI is under the responsibility of the Ministry of Finance and Budget.
Data source/ Agency	Ministry of Finance, CNAC
Verification Entity	IVA
Procedure	The IVA will review and approve the reports prepared by the Program Technical Coordinating Units (TCUs) and carry out site inspections and in-depth reviews of specific items as required.



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DLI 8	Operationalization of the WRS in the Extended Groundnut Basin
Description	This DLI aims to promote the warehouse receipt system in order to improve access to finance for agricultural producers, consolidators, traders and processors. ORSRE is the body that oversees the operation of the system and issues approvals to warehouse managers to enable them to issue warehouse receipts recognized by financial institutions. This DLI has three milestones: (i) ORSE is fully operational (key personnel and budget are put in place); (ii) the warehouses are approved by ORSR and iii) receipts are financed by financial institutions.
Data source/ Agency	Ministry of Commerce and industry, ORSE
Verification Entity	The IVA will verify the achievement of the DLIs as per the defined verification protocols for each DLI;
Procedure	The IVA will review and approve the reports prepared by the Program Technical Coordinating Units (TCUs) and submit them to MEF, for onward submission to the Bank, along with the accompanying evidence. In addition, the IVA will carry out site inspections and in-depth reviews of specific items as required, such as investment activities and beneficiary POs and SMEs, on a random sample basis

DLI 9	Number of milk collection centers supported and/or equipped and operational
Description	Number of milk collection centers supported/equipped with milk storage
Data source/ Agency	Ministry of Livestock
Verification Entity	The IVA will verify the achievement of the DLIs as per the defined verification protocols for each DLI
Procedure	The IVA will review and approve the reports prepared by the Program Technical Coordinating Units (TCUs) and submit them to MEF, for onward submission to the Bank, along with the accompanying evidence. In addition, the IVA will carry out site inspections and in-depth reviews of specific items as required, such as investment activities and beneficiary POs and SMEs,



on a random sample basis

DLI 10	Monitoring and Evaluation (M&E) system each at MAER and MEPA for agriculture and livestock performance in place and functioning
Description	Adequate monitoring and evaluation systems in place and operating in each MAER and MEPA to track Program performance
Data source/ Agency	M&E Directorate of Ministry of Agriculture and Ministry of Livestock
Verification Entity	IVA
Procedure	The IVA will review and approve the reports prepared by the Program Technical Coordinating Units (TCUs) and carry out site inspections and in-depth reviews of specific items as required.



ANNEX 3. DETAILED PROGRAM DESCRIPTION AND TECHNICAL ASSESSMENT AGRICULTURE AND LIVESTOCK COMPETITIVENESS PROGRAM FOR RESULTS

A. STRATEGIC RELEVANCE OF THE PROPOSED PROGRAM

1. **Considering its role in the Senegalese economy, the agricultural sector is centrally placed to ensure sustainable and inclusive growth. However, agriculture remains vulnerable to weather shocks, which are likely to intensify with climate change.** The agricultural sector grew at an average rate of 3.2 percent between 2000 and 2016, but that average conceals considerable volatility. Despite substantial growth in output since 2015, agricultural growth has been insufficient to diminish poverty, especially in rural areas. The big swings in agricultural growth mainly result from the effects of weather and climatic hazards on pastoralism and rainfed crops such as groundnuts, millet, and other cereals that have traditionally dominated agricultural production. These swings are highly correlated with large changes in overall growth rates, suggesting that for Senegal to maintain the large growth in agricultural output attained since 2015, more effort is needed to protect agriculture from climatic variability and enhance the resilience of rural livelihoods.
2. **Senegalese agriculture is vulnerable to climate shocks, with drought being the most important risk in terms of frequency and impacts.** A strong correlation exists between changes in agriculture contribution to GDP and the meteorological conditions, demonstrating agriculture's sensitivity to weather-related events. The food crisis resulting from the 2011 drought affected a sizable fraction of the country's population. Average rainfall has decreased by about 30 percent since 1950 with increasing variability between years, causing severe droughts and flooding episodes, while the average annual temperature increased by 1.6°C. Furthermore, while uncertainty remains regarding longer-term climate change projections, short- and medium-term rainfall deficits and variabilities, combined to increased average temperatures, are expected to continue to plague Senegal's agriculture sector. Indeed, the frequency and severity of droughts are estimated to remain the same or increase. Senegal's Intended Nationally Determined Contribution (INDC, 2015) considers adaptation options as top priority to allow for higher resilience of its rural population to increasingly unpredictable weather patterns. Senegal's climate change strategy is based on the vision of Climate-Smart Agriculture (CSA) and access to modern energy-saving technology for everyone. It seeks good adaptation practices and techniques that will combine sustainable productivity growth and increased reserve stocks in communities to reduce food insecurity, and permit conservation of natural resources while enhancing carbon sequestration and reducing GHG emissions. The Program will emphasize support to sustainable intensification and diversification by promoting the use of CSA and other sustainable agriculture practices.
3. **In recent years under PRACAS and PNDE (the national blueprints for agricultural development), the production of key staples has surged with the expansion of cropped areas and increased input use encouraged by public policies.** To modernize and develop the agricultural sector, the government has subsidized seed and other inputs, provided financial support, supported agricultural mechanization, and promoted measures to develop farmers' skills. These policies raised yields and production of the main crops identified as priorities under PRACAS—cereals, horticultural crops, and pulses. For example, between 2013 and 2017 rice production rose 160 percent, onion production by 74 percent, and groundnut production by 108 percent. Continued public support for



rice over the last two decades, including support for increased investment, reforms in irrigation management, and the expansion of lowland (and rainfed) cropping systems—is paying off with higher rice yields, surpassing the African average and closing the gap with the world average. The private sector has contributed to the improvement in agriculture productivity owing to the modern processing units developed along the Senegal River Valley.

4. **However, recent improvements in output are linked more to higher input use and area expansion than to fundamental productivity increases, and they have had little impact on job creation.** Labor productivity in agriculture has not improved in the decades, and very little improvement in TFP (such as innovation and skills) has occurred. To achieve the objective of poverty reduction and drive the government's transformation agenda, TFP and labor productivity must grow significantly through increased employment opportunities for the rural workforce (including off-farm employment) and support for producers to modernize and integrate their value chains more closely with the economy.

5. **While some public policies have helped boost production, concerns about the efficiency and sustainability of those policies highlight the need to focus public spending on productive factors that will support the transformation agenda.** Government policies, including high public spending on agricultural subsidies, have had a less than proportional impact on the added value created in the economy. While three-quarters of the budget allocated to agriculture was spent on crops, only half of the growth in agricultural GDP stemmed from crop production, raising concerns about the efficiency and sustainability of these expenditures. Input subsidies may have boosted agricultural production, but as noted, they have not led to an increase in TFP.

6. **The groundnut sector illustrates many of these concerns.** Government support to groundnut prices through the state-owned oilseed marketing company (*Société Nationale de Commercialisation des Oléagineux - SONACOS*) has proven ineffective¹⁵. It has distorted competition among groundnut buyers, delayed the modernization of the groundnut sector, prevented its alignment with international markets, and used scarce government resources that could otherwise have supported the agricultural resilience agenda and/or strengthened social protection programs. Since 2014, reforms undertaken by the GoS to liberalize the groundnut market have started yielding results, increasing groundnut exports and attracting new investments in the value chain (storage, deshellling facilities, with significant potential in term of off-farm employment). At the same time, however, distortionary policies are providing a lifeline for the less profitable oil-processing industry and preventing farmers from capturing the full value of the expanding export market for whole nuts. Given these circumstances, the government should anchor its groundnut policy framework in reorienting the value chain to produce high-quality groundnuts for export and the confectionery industry, including specific protection against large swings in revenue occurring when international prices and domestic production are low. This reorientation will require Senegal to enact reforms that create a level playing field for the private sector to invest and innovate in groundnut processing and marketing.

¹⁵ Only 82,000 metric tons were collected in 2017 against a total production of 1 million metric tons. The projected purchase of 300,000 metric tons in 2018 was expected to cost about US\$120 million or 0.8% of national GDP.



7. **Several additional steps must be implemented to achieve a sustained rise in agricultural production and productivity.** The agricultural sector should be better integrated with other sectors of the economy, starting with the local food transformation industry, which frequently uses imported inputs. Senegal should also improve risk management mechanisms to shield itself against volatile climatic conditions by: (i) improving farmers' resilience to weather shocks through the development of climate-smart technologies such as high-yielding, drought-tolerant, and early maturing varieties; (ii) developing irrigation systems to better control water and gradually move away from rainfed agriculture; and (iii) developing sufficient infrastructure to support a more productive livestock sector. Stronger cooperation is required between research centers and agricultural advisory services to facilitate the transfer of knowledge that can reinforce the technical capacity of small-scale producers to boost productivity. Efforts should be made to improve the reliability of agricultural statistics by using new ICTs such as GPS and drones, along with adequate estimation methodologies and improved weather forecasts. Finally, it is critical to encourage the private sector to play a bigger role in the development of agriculture.

8. **PRACAS (focusing on crops) and PNDE (focusing on livestock) have been reviewed and extended recently to better respond to the foregoing challenges.** Recognizing the initial achievements at the institutional and farm level, the review recommended that the future efforts of PRACAS and PNDE should emphasize value chain development, adding value beyond the farm gate in response to market demand, the diversification of markets, and attracting private sector investments to the agri-food sector. The review also recommended increasing access to investment support to a wider range of stakeholders, particularly agricultural credit, and to address impact and sustainability concerns. The proposed Program will support MAER and MEPA to implement these recommendations, with a view to consolidating and sustaining the achievements of the first phases of PRACAS and PNDE while addressing shortcomings in marketing and adding value to agri-food production.

B. TECHNICAL SOUNDNESS

9. **The design of the Program was informed by recent evaluations and analytical work.** Program design benefitted from the results and the recommendations of internal reviews as well as recent sector work by the WBG and other partners, such as Food and Agriculture Organization of the United Nations (FAO). On that basis, the design of the Program recognizes that improvements are needed in three complementary areas: (i) strengthening the capacity of some entities and agencies created under PRACAS and PNDE, including MAER and MEPA, as well as affiliated government entities and the inter-professions, so that they can fully carry out their mandated activities; (ii) accelerating the implementation of key reforms initiated under PRACAS I (such as subsidy reforms); and (iii) supporting improvements to existing instruments to increase investments by small and medium producers and enterprises in the agri-food sector.

10. **The Program Development Objective** is to enhance productivity and market access of priority commodity value chains and livestock, in the Extended Groundnut basin and Agro-Pastoral Areas.

11. **To achieve its development objective, the Program will focus on three Results Areas (RAs).** The RAs emphasize sustainable intensified productivity and strengthened farmer resilience, increased market access and value chain integration, and improved sector governance. These RAs have strong synergies, as the following discussion will indicate.



Results Area 1: Improved crop and livestock productivity and resilience

12. This RA is aligned with LPDSA and LPDE Specific Objectives 1 and 2, respectively. For the crop sector, this RA focuses on improving productivity and strengthening resilience by promoting climate smart agriculture practices and also diversification to mitigate market and climate risks faced by producers in production systems in the target areas. For the livestock sector, this RA will address major obstacles to improved livestock production and productivity (primarily animal diseases and poor feed) and will include genetic improvement for selected production systems and husbandry practices. The PforR interventions in both sectors will emphasize climate co-benefits.

13. ***Sub-Results Area 1.1.a: Increased crop productivity.*** Results under SRA 1.1.a. will be achieved by the sustainable intensification of major agricultural production systems with an emphasis on groundnuts, in addition to other priority cropping activities, through four main sets of activities:

- a) *Adequate production and availability of certified seed.* Better access to certified seed adapted to local agro-climatic conditions and market demand is a prerequisite for sustainably enhancing on-farm productivity, and it implies the establishment of a market-driven national seed system. Such a system needs to be based on a sufficient supply of breeder and foundation seed from ISRA, an efficient and professional network of seed multipliers from the private sector, as well as effective seed production quality control by public institutions. To that end, this SRA 1.1.a. aims to: (i) restore ISRA's capacity to produce and manage stocks of foundation seed for groundnuts, including through partnerships and contractual agreements with seed enterprises; (ii) develop the professional capacities of seed multiplication cooperatives and private enterprises to respond to market demand (in terms of variety, quality, and quantity) for seed of groundnuts as well as diversification crops; and (iii) strengthen the technical and institutional capacities of the public seed quality control and certification services (DISEM) and other private entities as delegated by the public authorities. Certified seed production will be complemented by phasing out by 2022 the current government seed subsidy; the subsidy program, designed to compensate for the certified seed shortage, subsidizes mostly uncertified and unproductive seed. The Program will also scale up the promotion of suitable varieties, notably the new varieties recently released in Senegal and West Africa under WAAPP;
- b) *Access to quality inputs (fertilizer, pesticides, seed, etc.), small agricultural equipment, and technical services.* The Program will support increased use of relevant farm inputs through smart subsidies (targeted, temporary, and degressive) to give producers better access (including access through POs) to technical innovations such as seed, inputs, and tools from the private market. With support from the Senegal Safety Net program, the subsidy program will be reformed to improve targeted access by small, poor producers through systematic use of the Unique National Registry. The current input subsidy program will also be revised to increase its targeting of women; this will allow to address the gender gap in productivity that is partly linked to the fact that women have less access to productive resources, among them inputs. The local agro-dealer network will be strengthened to enhance farmers' access to adapted labor-saving tools and small equipment for crop and livestock production, via loans or leasing by financial institutions. The Program will also promote integrated land/ soil management to address decreasing soil fertility, by: (i) soil mapping by ISRA and other partners to update soil



fertility status, including soil carbon and mineral content (especially phosphates), to formulate the required soil fertility amendments; (ii) facilitating access by producers to relevant information for managing and restoring soil fertility, including field testing kits; and (iii) promoting the establishment of an official quality control body for fertilizers and other agro-chemicals;

- c) *Access to quality agricultural support services (field and digital).* The Program will support the widespread diffusion of proven climate-smart technologies/ innovations developed by R&D (including under the WAAPP regional networks). To this end, the Program will support the formulation and implementation of a national agricultural services strategy that will help: (i) disseminate agro-climatic information and climate-smart technologies and energy-efficient innovations; (ii) strengthen the technical and organizational capacities of producers organizations (POs) and processor SMEs; (iii) facilitate the participation of value chain actors in interprofessional innovation platforms; (iv) reinforce the capacity of the National Agricultural Advisory Agency (ANCAR) and technical assistance to POs by establishing auxiliary local advisory services; these services will help disseminate sustainable CSA practices for intensification and diversification, in particular through targeted technical training and Farmers' Field Schools (FFSs); and (v) reinforce MAER's plant protection services, notably as concerns the use of biopesticides. Efforts will be made to leverage modern Information and Communication Technologies (ICTs) and use digital agricultural applications to scale up best practices; and
- d) *Climate-risk management and sustainable use of agricultural resources* (mainly soil, water and biodiversity). The Program will support the use of CSA technologies and practices, integrated natural resource management for sustainable intensification and diversification of rainfed family farming systems, involving crops and livestock, with the view to addressing their resilience and sustainability challenges. Key elements include: (i) greater adoption of CSA technologies for improved water management in rainfed production systems, including conservation tillage and water storage for complementary irrigation, as appropriate; and (ii) enhanced integration of crop and livestock activities and participatory land management, at basin and plot level, to improve soil conservation and integrated management of organic and mineral fertility.

14. **Sub-Results Area 1.1.b.: Increased livestock productivity.** Results under SRA1.1.b. will be achieved by the sustainable intensification of selected livestock production systems, adapted to the increasing climatic variability and change: small to medium scale dairy and small ruminant production. These systems are closely related to crop production systems (especially the targeted groundnuts systems), generate products that are in high demand for domestic consumption, can show a significant margin of production and productivity improvement, and can contribute significantly to poverty reduction and improved food security. The proposed interventions are split into four main sets of activities:

- a) *Improved animal health.* The prevalence of animal diseases and constraints on animal health services can severely reduce livestock productivity. The Republic of Senegal has committed to eradicating PPR by 2025–30, in line with the FAO/ World Organization of Animal Health (OIE) global eradication strategy, because this disease has a highly detrimental impact on small ruminant production and thus on poverty reduction. Achieving this target will require



investments to be scaled up to roll-out the national strategic plan for PPR eradication, ensure vaccine quality, mark animals, and conduct sero-surveillance, among others. Poultry production continues to be severely impaired by recurrent outbreaks of Newcastle disease and fowlpox, while the vaccination program has not even reached 5 percent of the poultry population. A new strategy is required to significantly increase poultry protection against these diseases and develop national capacity to produce the bivalent thermostable vaccine. Improvement of the national Veterinary Services in line with international (OIE) standards will include the finalization, validation, and submission for approval of the new Animal Health and Veterinary Public Health Code.

In view of these priorities, activities supported by the Program will: (i) ensure an adequate supply of veterinary inputs and equipment (such as vaccines, needles, cold chain equipment, vaccination pens, and means of transport for health workers); (ii) provide support for operating costs as well as training for the network of animal health professionals; (iii) support communication activities related to animal health; (iv) support ISRA's capacity to produce the bivalent (Newcastle/fowlpox) thermostable vaccine ; and (v) support development of a poultry vaccination strategy and implementation of its pilot phase.

- b) *Access to improved forage, fodder, and feed.* Because the supply and quality of forage and feed are other critical aspects of livestock production and productivity, the Program will seek to increase seed forage production and distribution to progressively meet the needs of dairy and fattening units and mobile herds to complement natural rangeland production.

To meet these needs, the Program will support (i) the establishment of an agreement with ISRA for the production of quality foundation seed of a diverse range of forage crops, that will serve to produce certified seeds after multiplication (first and second generations). The seeds will be multiplied through a network of selected private professionals, certified by DISEM, and disseminated. The program will support the distribution of these seeds to ensure the establishment of fodder production plots in the intervention area ; (ii) the strengthening of the agro-pastoralists capacities on techniques of valorization of agriculture by-products (composting, chopping, treatment with urea/molasses, etc.) to derive a better profit either in agricultural manure or in animal feed, also supporting them to acquire minimum equipment; and (iii) with relevant stakeholders, a joint strategy on feed will also be developed, and norms and a regulatory framework specifying the conditions for feed production and marketing will be revamped, to ensure the quality of feed products.

- c) *Access to improved genetic material for resilient dairy production.* The program will support the formulation of a National Genetic Improvement Plan, which will develop a comprehensive operational strategy to prioritize and better organize the Government's interventions in genetic improvement of all species (with dairy in priority), including local breeds (which are best adapted to local conditions).
- d) *Improved animal housing and herd management.* The Program will support the development of detailed guidelines for various categories of production systems, different scales of production (small to medium), and species (all major species produced), reflecting cost-efficient, easily accessible and energy saving equipment, techniques and tools, and results



expected in production and productivity from adopting these resilient management practices. In parallel, MEPA will continue to work on mechanisms to facilitate access to credit for livestock producers to implement the related investments.

15. ***Sub-Results Area 1.2: Increased agricultural resilience.*** Results under SRA 1.2. will include diversifying the agricultural production base and extension of the pilot program of social safety nets initiated by MAER. Results under SRA1.2 will be achieved through two sets of interventions:

- a) *Reinforcing and diversifying the agricultural production base.* This set of activities will help to expand the cropping mix beyond the traditional rainfed array (groundnut, millet, sorghum) to include tree crops (cashew, mango) and horticultural produce. Support to implement diversified production systems will include rehabilitation of degraded land and soils through investments, access to proper seeds, technology and know-how for the new crops tested and by building the capacity of farmers and herders to use water and land management techniques and infrastructure (small catchment weirs, retention basins, anti-salt structures, pasture and woodlot management, windbreaks, etc.). Small-scale water infrastructure will be rehabilitated or developed (where conditions for sustainability so allow) to expand the area under efficient irrigated systems and improve livestock watering points (use of excess flow from boreholes, solar pumping, and so on). Access to CSA inputs (including adapted drought tolerant seed and organic fertilizer), as well as technical and managerial training for production diversification and value addition and building capacity of communities in land management and use, and farmers and herders in integrated soil and water management will be supported. Provisions will be made to facilitate access to land, finance, and technical services by beneficiary farmers, notably youth and women, individually or in organized groups; and
- b) *Setting up a cash transfer program.* Support for agricultural insurance should be complemented by ongoing social protection programs, such as the government assistance program for poor households (*Programme National de Bourses Familiales* - PNBSF) and the upcoming World Bank–funded Social Protection Program. These programs can enable the poorest farmers, who lack access to insurance, to recover from climate-related disasters or drastic groundnut price decrease through the provision of emergency relief funds and assets to restart production cycles. The Program will foster strong inter-ministerial coordination to enable the social protection agency to design and adopt robust assistance strategies, leveraging such tools as the National Unique Registry (RNU) and the network of facilitators on the ground, and adapting the payment systems established in the PNBSF to respond to climate shocks and disasters.

Results Area 2: Improved business environment and market integration

16. RA2 aims at strengthening the links between agricultural production and other segments of the value-chain, promoting inclusive business alliances, and removing critical capacity and physical impediments to promote the development of private-sector-led services and agro-industries all along the value chains. SRAs 2.1 and 2.2 are aligned with LPDSA Specific Objectives 2 and 3, and SRA 2.3 is aligned with Letter of Livestock Development Policy (LDPE) Specific Objectives 1 and 3.

**17. Sub-Results Area 2.1: Improved groundnut business environment and market integration.**

Results under SRA2.1 will focus on the groundnut value chain and will be achieved through four interventions:

- a) *Lifting distortionary policy and regulatory measures.* Development of the groundnut value chain has been plagued by government regulations and policy interventions that have restricted fair and open competition, promoted rent-seeking behavior, and brought about inefficient and inappropriate allocations of public resources. The Program will support revision of Decree No. 85-178 of February 18, 1985 to remove provisions and regulations that impede free primary marketing, including the regulations for transport, quality control, and competition between operators that collect and process groundnuts. It also supports the review and necessary revision of the system for setting the groundnut producer price (currently based on the world market price for groundnut oil rather than whole nuts) and phasing out of the subsidy to groundnut oil processing companies. Access to CSA inputs (including adapted drought tolerant seed and organic fertilizer), as well as technical and managerial training for production diversification and value addition, building capacity of communities in land management and use, and farmers and herders in integrated soil and water management will be supported. The value chain actors that currently run the producer price setting system will receive technical capacity building to master the new system and update it as needed;
- b) *Reorganizing the groundnut inter-profession and establishing an effective PPP.* The CNIA was established to be a key player in the promotion and management of the groundnut value chain, but institutional and organizational weaknesses cause it to be ineffective. Given the new dynamics in the value chain and the development prospects presented by growing market opportunities, the CNIA must be restructured to become a much stronger institution, both in terms of legitimacy and managerial capacity. A review of the CNIA is currently planned and is expected to provide recommendations for restructuring. The restructuring is expected to include greater representation of key players in the value chain, such as POs, industrialists, off-takers/ exporters, and artisanal processors, among other market actors. In addition, the program will support the evaluation of the current partnership framework agreement between the Government and CNIA and related action plan. Important issues to be effectively addressed by the CNIA under the revised PPP framework include: (i) formulation of value chain development strategies in close consultation with relevant government departments; (ii) an appropriate framework for contractual agreements between POs and buyers; (iii) capacity building for farmer organizations/institutions on climate-smart value chain business development; (iv) the formulation of, and adherence to, export quality standards to ensure a good international reputation for groundnuts originating from Senegal; and (v) management of the (floor) producer price setting mechanism, independently and objectively, taking into account relevant world market parameters;
- c) *Reinforcing agri-food product quality control and meeting export quality standards.* Without adequate product quality control, market outlets can quickly close for produce with large development potential such as confectionery groundnuts, maize for animal feed, and



mangoes¹⁶. Therefore the Program will support: (i) the dissemination of appropriate technologies to control aflatoxin in groundnuts and maize along the value chain (including use of Aflasafe from the International Institute for Tropical Agriculture, which has been successfully tested in Senegal); (ii) DPV in extending the area treated for fruit fly infestation (only 3,000 hectares of mango orchards were treated in 2018, although 25,000 hectares were infested)¹⁷; and (iii) strengthen the quality control system for agri-food products infested with aflatoxin and fruit flies; and

- d) *Facilitating product marketing.* The Program will support the promotion of contract-farming systems, including multi-year contracting arrangements that could reduce uncertainty for value chain participants, foster professionalization of producers, and promote traceability of the produce. Contracting should help: (i) procure farm inputs for producers, thereby eliminating the need for government intervention; (ii) secure market outlets for producers; (iii) facilitate access to financing; and (iv) reduce uncertainty for industry and exporters in procuring harvested groundnuts. The program will also *support* dissemination and sharing of market information (price, quantity, and quality). Finally, while large-scale infrastructure (such as roads, power plants, and manufacturing or industrial processing facilities) are excluded from PforR financing, the Program will support the construction and rehabilitation of small-scale rural infrastructure such as feeder and connector roads, as well as aggregation/ storage and processing parks in and/or around selected economic poles. The Program will ensure that such investments are climate resilient.

18. **Sub-Results Area 2.2: Increased livestock market access.** Results under SRA 2.2 will be achieved through the following interventions designed to reduce food losses and increase revenues and jobs along the dairy value chain. The Program will help POs and SMSEs connect with and meet the requirements of the main companies for processing and marketing dairy products (located and selling mainly in urban areas), to increase their procurement of locally produced milk; and provide targeted support to milk producers and value chain actors (milk collection, cold storage, processing and sale) to improve value addition to milk produced in less connected areas, yet important dairy producing areas. The Program will focus on three intervention areas:

- a) *Establishing conditions to create linkages between producers and other value chain actors.* The Program will support the integration of production and industrial segments by facilitating contractual arrangements of milk producers with processors. This will be based on the establishment of platforms in the main dairy producing areas, allowing identification of opportunities for market development, producer-processor linkages, leading to the development of business plans and investments;
- b) *Facilitating access to finance:* The Program will facilitate access to finance through *Fonds d'Appui à la Stabilisation* (FONSTAB) to selected beneficiaries (individuals or groups of producers) who meet requirements (quality and quantity). The Program will therefore support

¹⁶ For example, Senegal received 24 alerts from the EU in 2017 on fruit flies on mango.

¹⁷ DPV Report of Evaluation Meeting at Mid-term of Mango Export Campaign 2018, August 3, 2018.



- the establishment and rehabilitation of milk collection and processing centers. Technical and managerial capacities of professionals in the value chains will be also be strengthened; and
- c) *Supporting POs and SMEs.* The Program will support existing POs to increase their representation and efficiency to serve as both providers of advice and services for members producing and marketing animals and animal products (disseminating techniques and innovative CSA technologies, respecting standards, promoting new products adapted to demand, branding and certifications, business and marketing skills) and interface with the Government to develop and implement programs. It will also strengthen the capacity of SMEs to scale up and/or upgrade production. To address the gender gap in income, that is partly linked to women with limited access to markets, specific training and capacity building will be provided to women and women's groups in order to foster their participation in business alliances.

19. ***Sub-Results Area 2.3: Increased access to financial services.*** Results under SRA2.2 will be achieved through two interventions:

- a) *Improving agricultural insurance.* Agricultural insurance has been gaining significant traction in Senegal over the past few years; around 200,000 farmers and herders were covered during the 2018 crop season and more than 269,000 in 2019. To meet the objective of covering an additional 131,000 by 2024, the Program must address the key issues of affordability, data availability, and the lack of awareness of the benefits of insurance. The Program will therefore support the reimbursement of arrears owed to CNAAS and the premium subsidy envelope that the Government commits on an annual basis; the subsidy rate for small-scale farmers will be 50 percent in 2020, and an exit strategy is expected by 2024. The Program will also provide support for the Government to conduct mass awareness-raising campaigns on the benefits of agricultural insurance and will build government capacity to collect and disseminate the climate data required to design appropriate products and claim settlement processes; and
- b) *Promoting the WRS.* WRS is in its development phase in Senegal, which has started with IFC's support to the Ministry of Commerce and Small and Medium Enterprises in 2014. The WRS is expected to be used as collateral to receiving loans from financial institutions. Further to the adoption of the WRS Law in 2017 and the implementing regulation in 2019, the Program will support its promotion in the extended groundnut basin.

Results Area 3: Improved sector governance, coordination, and program management

20. RA3 is aligned with Specific Objective 4 in both the LPDSA and LPDE. It addresses the policy and market failures that prevent efficient private sector development in the agri-food sector, focusing on the groundnut value chain. It also strengthens the organizational and institutional environment to facilitate the development of diversified and resilient agri-food value-chains, to improve the coordination, planning, and implementation of government programs in agriculture and livestock sector, while meeting its climate adaptation and mitigation challenges, and to monitor, assess, and report on progress. RA3 encompasses the following intervention areas:

- a) *Strengthening the policy dialogue on agriculture.* The Agro-Silvo-Pastoral Orientation Law (LOASP, June 2004) forms the basis of Senegal's rural development policy and creates a Higher



- Council for Agro-Silvo-Pastoral Orientation (CSOASP) and Regional Agro-Silvo-Pastoral Committees (CRASPs). The Program will support both CSOASP and CRASPs to: (i) conduct their operations, in particular the organization of their periodic steering and programming meetings, and (ii) execute their missions to implement LOASP, in particular to ensure that coherent actions, projects, and programs support proper implementation through balanced development of the territory and subsectors and the promotion of an enabling environment in rural areas. The Program will also support finalization of the decree establishing and setting the operating rules for the National Agro-Silvo-Pastoral Advisory Body (SNCASP), including operation of its advisory services for promoting agricultural innovation;
- b) *Reinforcing the technical support services of MAER and MEPA.* The Program will help to build capacity focusing on agricultural research, agricultural extension and training, and animal health services, with a focus on modernizing family farms and addressing the key production constraints of small-scale producers. It will also support the development and approval of an upgraded regulatory framework for agricultural extension and training;
 - c) *Reinforcing capacity at MAER and MEPA for program planning, statistics, and M&E.* The Program will support key capacity-building efforts to: (i) strengthen the ability of MAER, MEPA, and their regional departments to plan and coordinate the different stakeholders and projects involved in implementing PRACAS II and PNDE; and (ii) strengthen national institutions in charge of data collection, processing, and analysis to improve their operations to better inform policies and monitor program implementation. Support will focus particularly on updating capacity at MAER and MEPA to run efficient MIS and M&E systems, which should better equip them to collect, process, and produce the data required to assess the performance and implementation of PRACAS II and PNDE;
 - d) *Conducting other capacity-building activities.* The Program will also provide other support to strengthen capacity, i.e., adequate means and facilities, including computer and transport equipment, for MAER and MEPA agents to perform their respective tasks and implement priority surveys; and
 - e) *Technical coordination.* The Program will support two TCTs for the crop and livestock subprograms, respectively, including payment of salaries and other operating expenses as needed.

21. **Program activities will generate climate adaptation and mitigation co-benefits.** Under Result Area 1, several activities will be specially geared towards increasing climate change co-benefits as they relate to the promotion of CSA practices as well as more efficient/ productive crop and livestock production systems that minimize energy and natural resource use, and specialized activities regarding weather forecasts or early warning systems. This will include, for example, facilitating the diffusion of agro-meteorological information to farmers—thus increasing their ability to adapt to climate change, or promoting the use of renewable energy in tillage, storage and agri-food processing units. Improved animal health (reduced incidence and prevalence of contagious diseases), more efficient herd management and nutrition (through forage and fodder production in particular) will contribute to reducing efficiency gaps by avoiding losses and increasing the productivity of animals, as well as reducing the need for synthetic



fertilizers and contributing to Carbon sequestration in soils, thereby adapting to and mitigating climate impacts. Climate change adaptation and mitigation co-benefits will arise also from the diffusion of a range of CSA technology options and innovations adapted to selected value chains in the targeted agro-ecological zones. Under Result Area 2, facilitating access to markets will bring about adaptation and mitigation co-benefits: improved market information will boost farmers' ability to adapt to climate variability, notably by helping them better time their harvests and thus decrease post-harvest losses. Support for quality certification programs with provisions that help producers adopt practices and varieties that increase resilience to climate change and climate variability will multiply the mitigation potential of CSA and energy-saving practices. Improved market access will lead to more efficient herd management in the livestock subsector, as farmers will react more to market signals. These schemes will also help further tap the mitigation potential that can arise from improved CSA and energy saving practices. Under Result Area 3, the integration of climate change issues in participatory sector planning, program implementation and evaluation at all levels will directly contribute to climate change adaptation for resilience but also mitigation of its impacts.

Table 3.1: Key Program CSA actions with co-benefits on climate adaptation and mitigation in the targeted area

Results area	Adaptation co-benefit	Mitigation co-benefits
RA 1: Improved crop and livestock productivity and resilience		
RA 1a: Increased crop productivity	<ul style="list-style-type: none">• Agro-climatic information/ early warning system• Research focused on increasing climate-resilience• Quality agriculture advisory services to promote adapted varieties & CSA practices for resilient productivity and adaptation in groundnut-based systems• Multiplication/dissemination of drought tolerant varieties/ seeds and related CSA inputs (+ subsidy reform)• Climate-risk management and sustainable use of agricultural resources (land, water, biodiversity)• Promote CSA technologies & energy-efficient innovations• Integrated watershed, soil & water management, agroforestry and CSA practices for adaptation and resilience in groundnut-based systems• Innovation stakeholder platforms to promote use of adapted CSA practices (incl technical assistance)• Capacity strengthening of producer & their organizations (PO) for integrated resource management adapted to CC/CV at basin and farm level• Scale up ICT for digital agricultural information-dissemination systems, support decision-making	<ul style="list-style-type: none">• Optimize sustainable use of natural resources (water soils biodiversity)• Integrated land/soil management and water use (with protected/buffer zones, agroforestry)• Reduced ecosystem degradation/ deforestation, 'bush' fire management• Capacity building and access to quality agricultural services, climate risk management and sustainable NRM• Reduced GHG emissions, use of compost, organic manure, bio digesters• Increased Carbon storage/pools in soils and vegetation (reduced tillage, OM management soil coverage, composting OM)• Energy-saving technologies (tillage, transformation, value addition)• Enhanced capacity/training producers and institutions on integrated and participative agric. resource management• ICT to support decision-making for GHG emission reduction
RA 1b: Increased Livestock productivity	<ul style="list-style-type: none">• Improved animal health services (reduced incidence and prevalence of contagious diseases linked to CC impact)• Invest in food safety measures for livestock if food and water security is threatened by CC/CV	<ul style="list-style-type: none">• Reduced livestock methane/ GHG emissions through manure management and feeding practices (incl. nutrition efficiency, efficient herd management)



Results area	Adaptation co-benefit	Mitigation co-benefits
	<ul style="list-style-type: none"> • Climate-smart pasture management, new forage crops species and varieties better adapted to climate impacts. • Fodder production (varieties/species adapted to CC), harvest and storage for productivity resilience • Strengthening of farmers'/herders' organizations for common management CSA practices at basin/farm levels • Support farmers and institutions to adapt to climate change impacts on the livestock sector through training, capacity building, and information dissemination • Promotion/funding for research on climate resilient practices/development • Invest in climate smart livestock infrastructure/equipment. • Crop/livestock integration (integrated climate risk management of natural resources for sustainable and resilient use of agricultural resources 	<ul style="list-style-type: none"> • Improved carbon pools (rangeland management, increased carbon content of soil, rehabilitation of degraded lands, etc.) • Reducing methane or other GHG emissions (e.g. manure management with bio-digesters, improved breeding practices, improved animal health services, nutrition efficiency, etc.) • Support farmers and institutions to adopt climate-smart practices through capacity building, and information dissemination • Bush fire reduction/ sustainable community land management and use
Sub-Results Area 1.2: Increased agricultural resilience	<ul style="list-style-type: none"> • Protect against climate-induced water scarcity, invest in efficient rain-water harvest & irrigation/drainage systems • Rehabilitation of degraded lands/soils, climate resilient land management and infrastructures (irrigation & drainage) • Rehabilitation/development of sustainable permanent and supplemental small-scale irrigation infrastructure for off-season horticulture production (issue linked to CC/CV). • Diversification/use of drought tolerant varieties • Organic fertilization and soil OM management • Crop diversification and multi-cropping (pulses, vegetable production perimeters, seed multiplication, etc.) • Diversify livelihoods vulnerable to CC impacts 	<ul style="list-style-type: none"> • Investments in rehabilitation and recovery of degraded land & water control facilities • Adapted surface/underground water management – water saving technologies (drip irrigation, water efficient irrigation schemes) • Enhanced capacity and train farmers trained in participative optimal NRM management and energy conservation, • Promoted soil OM storage (C pool) • Efficient energy saving (tillage, solar pumping systems, etc.) • Reduced methane emission (lowland drainage)
Cross-cutting support	<ul style="list-style-type: none"> • Scale-up use of ICT systems for digital agriculture applications, including use of CSA practices • Develop and implement policy actions to scale-up CSA adoption • Capacity building of extension and POs in CSA practices for integrated crop & livestock production systems 	
RA 2: Improved business environment and market integration		
RA 2.1: Improved groundnuts business environment	<ul style="list-style-type: none"> • Implement aflatoxins, fruit flies, etc. control plan • Facilities (warehouses, markets, access roads) to reduce commodity exposure to extreme weather conditions • Assist with formulation of climate-informed business plans • Market information system adapted to CV to void losses • Capacity building for farmer organizations/institutions on climate-smart value chain developments 	<ul style="list-style-type: none"> • Certification/quality schemes containing provisions to incentivize farmers to adopt new practices/ techniques and varieties designed to increase their resilience and contribute to climate mitigation by CSA practices • Capacity building and awareness raising on climate change mitigation/sustainable energy use in all investment projects



Results area	Adaptation co-benefit	Mitigation co-benefits
	<ul style="list-style-type: none"> Value addition to groundnut production by improved storage, contract farming, value-addition (household income resilience) 	<ul style="list-style-type: none"> Investments in measures in existing agricultural supply chains dedicated to improvements in energy efficiency or resource efficiency upstream or downstream, leading to reduction in GHG emissions
RA 2.2: Increased livestock market access.	<ul style="list-style-type: none"> Dissemination of innovative CSA technologies, improving the capacity of producers, POs and SMEs for certification schemes that would incentivize farmers to adopt new CSA practices Integration of climate considerations in the construction and rehabilitation of market facilities Energy saving storage facilities/systems avoiding product losses (e.g. cold storage for milk) 	<ul style="list-style-type: none"> Energy saving /reduced GHG emissions Reduced losses and efficient use of natural and agricultural resources Efficient herd management (surpluses are commercialized)
RA 2.3: Increased access to financial services.	<ul style="list-style-type: none"> Expanding the Warehouse Receipt System (WRS) financing (use of production as collateral to secure loans) Strengthening the financial and institutional capacities of the national partial credit guarantee scheme (FONGIP), in order to de-risk and crowd in private credit to rural areas, Climate indexed agricultural insurance linked to improved agroclimatic and weather forecasting services Extension of agricultural insurance linked to use of improved inputs to promote CSA and contract farming 	<ul style="list-style-type: none"> Weather/climate indexed assurance to de-risk climate variability and change impact on investments Increased investment/livelihood resilience Increased capacity for agrometeorological information services
• RA 3: Improved sector governance, coordination, and program management		<ul style="list-style-type: none"> Integration of climate mitigation in sector planning, implementation and evaluation Support agriculture policy dialogue including operationalization of the National Agro-Sylvo-Pastoral Council (optimal natural resource use) Monitoring GHG emissions in agric. sector Capacity Building to MAER and MEPA on knowledge management and information services on agriculture and Climate Change/Variability

C. PROGRAM GOVERNANCE STRUCTURE AND INSTITUTIONAL ARRANGEMENTS

22. **Basic implementation principles.** The Program has a three-tiered governance structure with a Steering Committee (SC), two Technical Committees (TCs) and two Technical Coordination Teams (TCTs). MFB will be responsible for overall steering of the Program through the SC with a twin critical role: (i) ensure the engagement and coordination of ministries and other entities involved in implementing the Program, especially those external to the agricultural sector (such as the Ministry of Commerce and SMEs and the inter-professions), and (ii) mitigate the risks associated with inter-



ministerial coordination. MAER will be responsible for overseeing the crop subprogram, and MEPA will oversee the livestock subprogram with the SGs serving as Sub-Program Coordinators (SPCs). At ministerial level, the Program will adhere to PRACAS II and PNDE implementation arrangements, which have their own governance structure. MAER's and MEPA's will provide support through their Budget Programs (BPs) for technical follow-up, and FM and procurement through the DAGEs, with other resources provided for environmental and social safeguards, and M&E through the TCTs (see below). Detailed operational guidelines will be spelled out in the Program Operational Manual (POM). Both MAER and MEPA have experience with large donor-financed programs, including Bank-financed operations. Specific information and training efforts will be required at the Program's inception to ensure that key staff involved at that level are well informed about the details of the Program activities and modalities (as per the Program Operations Manual) and adjustments to existing instruments introduced with support from the Program. Figure 3.1 illustrates the Program implementation arrangements.

23. **Steering Committee (SC).** As the highest Program oversight body, the SC will meet twice each year to review Program planning, discuss Program results and challenges, and take the required operational decisions. The Committee will be chaired by the MFB SG and co-chaired by MAER's and MEPA's SGs. It will be composed of key MFB, MAER, and MEPA staff, as well as focal points from all other ministries and entities, including private sector entities involved in the Program. The SC will validate all official Program reports.

24. **Technical Committees (TCs).** The two TCs will provide technical advice to the SC, as well as to MAER's and MEPA's SGs in their role as Sub-Program Coordinators (SPCs) for the crop and livestock subprograms respectively. They will have a consultative role. Their advice will be sought for all aspects of Program implementation that will require technical decisions on the part of the SPCs. Each TC will be composed of about ten experts chosen by the SPCs, based on their expertise as relevant for Program implementation. The TCs will meet at least every quarter, or at shorter intervals whenever necessary, following the request of the SPCs.

25. **Technical Coordination Teams (TCTs).** MAER's and MEPA's SGs will be *de facto* Sub-Program Coordinators (SPCs) for the crop and livestock subprograms, respectively. Each ministry will be assisted by its DAGE for financial, administrative, and procurement responsibilities related to the PforR and will rely on its technical departments for responsibilities related to specialized technical matters. The technical assessment conducted for the Program has identified the need to strengthen capacity at MAER and MEPA to perform their Program coordination, management, M&E, and technical responsibilities, due to staffing and training constraints. For that reason, MAER's and MEPA's SGs will each be assisted by a small PforR TCT headed by a Sector Specialist and composed of an Administrative Officer, an Environmental Safeguards Specialist, a Social Safeguards Specialist, and a Monitoring and Evaluation (M&E) Officer. These staff will be civil servants selected from within the staff of MAER, MEPA, or affiliated entities, or independent consultants purposely recruited from outside MAER and MEPA under specific ToRs matching their responsibilities.

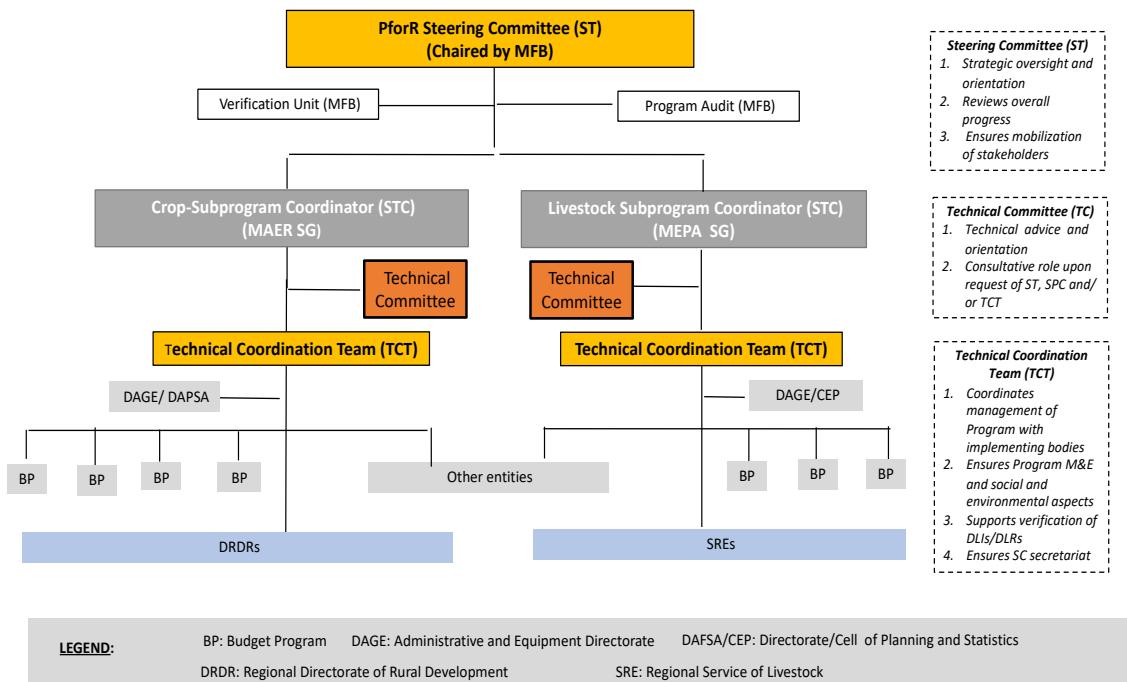
26. **The TCTs will liaise closely with all entities involved in the Program with regard to their related work programs.** The TCTs will work closely with a selected number of national services or agencies from MAER, MEPA, or outside entities, depending on their missions as they relate to the



implementation of the Program activities, RF and DLIs. The technical supervision of PforR activities will rest with the TCTs. They will vet Program activities and determine whether DLIs have been adhered to and disbursement can be authorized. They will consolidate the PforR progress reports to be sent to MFB through the SGs for submission to the SC, which will take final decisions on implementation progress and related disbursements. Program implementation and adherence to DLIs will require close collaboration among staff of all entities mobilized for implementation as well as compliance with procedures for verifying the results of the interventions. The TCTs will commission periodic quality audits to support verification.

27. **All entities involved in the Program will designate technical focal points; this network of focal points will be a counterpart to the TCTs.** The focal points will contribute to M&E activities with respect to their own Program responsibilities. They will receive the required training covering (among other things) the DLIs, data collection and reporting procedures, verification of data quality and accuracy, report formats, and the M&E work plan. The network of Program-related focal points is an important entity because of its role in ensuring that the Program will be implemented using agreed procedures and that results are adequately documented.

Figure 3.1: Program institutional arrangements





ANNEX 4. FIDUCIARY SYSTEMS ASSESSMENT AGRICULTURE AND LIVESTOCK COMPETITIVENESS PROGRAM FOR RESULTS

1. The fiduciary assessment reviewed the capacity of key implementing entities (MAER and MEPA) to: (i) plan, record, control, and manage all Program resources and produce timely, reliable information for stakeholders to monitor progress and make decisions; (ii) follow and monitor procurement rules and procedures, capacity, and procurement risks associated with the Program; and (iii) ensure that implementation arrangements are adequate and fiduciary risks are reasonably mitigated.
2. The review concludes that: (i) the fiduciary risk is High and (ii) the fiduciary arrangements complied with the World Bank Policy and Directives on PforR and provide reasonable assurance that the proceeds of the financing will be used in an economical, effective, and efficient manner for the attainment of the program development objectives. No high-value contract with a value exceeding the Operational Procurement Review Committee (OPRC) threshold is identified under the Program procurement plan.
3. The implementing entities PFM system has been strengthened through series of reforms aiming at enhancing the regulatory and institutional framework, and the integrated financial management information system. In line with the WAEMU Directive 06/2009/CM/UEMOA, dated June 26, 2009, Senegal issued a new organic Law (PFM organic Law n° 2020-07 of 26 February 2020) to strengthen the institutional framework for public financial management (PFM), moving to the budget program which requires performance-based allocation of budget and the decentralization of commitment authority to line ministries. These reforms have been delayed and are expected to be effectively implemented in 2020. The new legal framework allows for a more results-oriented approach in budget planning and execution. This comprehensive reform is expected to lead to: (i) the preparation of more realistic and sustainable multiyear budget forecast by programs; (ii) an adequate allocation of expenditures based on performance objectives; (iii) increased accountability of the principal commitment authorizers (line ministers and heads of other institution); (iv) effective supervision by Parliament of the execution of budget laws fostered by budget performance projects and reports by programs and ministries; and (v) ex-post controls to assess the effectiveness of management and performance. An IFMIS has been designed expressly to enable the implementation of the program-based budget approach within line ministries.
4. However, the policy alignment and lack of realism of the budget are still areas of persistent shortcomings which result in unpredictable budget cut, low budget execution performance or inadequate budget allocation to achieve the policy objectives. In addition, unreliable procurement planning and weak contract management, an ineffective internal audit function characterized by significant turnover, and delayed cash release and payment are the main areas of concerns and risks to be addressed through a strong but selective PAP and the mitigation measures detailed below.
5. The main mitigating measures and program action plan to address the fiduciary risks include, (i) agreement on the multiyear program expenditures framework agreement with the Government, (ii) limit the program expenditures framework annual budget deviance to +3 percent, (iii) appoint the Program Managers and fill the vacant Internal Inspection position, (iv) open a separate and dedicated account at the National Treasury to receive funds that will flow from the World Bank, (v) National Treasury to appoint dedicated accountants to handle and report on payments made at the request of the line ministries on



the dedicated account, (vi) roll out and effective use of the IFMIS and eProcurement system, and (vii) develop a contract agreement framework.

A. Program fiduciary assessment methodology, scope, and institutional arrangements

Methodology and scope

6. The fiduciary assessment of the PforR follows: (i) the Word Bank policy (November 2017) and directive for PforR (June 2019); (ii) the “four pillars” approach used by the Development Assistance Committee of the Organisation for Economic Co-operation and Development (OECD) in defining inherent procurement risks; and (iii) the PforR fiduciary assessment Guidance Note (June 2017). The fiduciary assessment focuses on identifying the key PFM strengths and shortcomings, including procurement of the implementing entities and measures to prevent and address fraud and corruption in achieving the overall development objectives of the Program.

7. The assessment covers the following critical elements of an open and orderly program PFM system:

- (a) *Planning and budget preparation.* The Program budget is realistic, policy based, and implemented in an orderly and predictable manner.
- (b) *Procurement.* Procurement system performance was assessed based on the government’s procurement legal framework and the degree to which the planning, bidding, evaluation, contract award, and contract administration arrangements and practices provide reasonable assurance that the Program will achieve the intended results through its procurement processes and procedures.
- (c) *Accounting and financial reporting.* Adequate program records are maintained, and financial reports produced and disseminated for decision-making, management, and Program reporting.
- (d) *Treasury management and funds flow.* Adequate and timely funds are available to finance Program implementation.
- (e) *Internal controls (including internal audit).* There are satisfactory arrangements to (i) monitor, evaluate, and validate program results; and (ii) exercise control and stewardship of Program funds.
- (f) *Program audit.* Adequate independent audit and verification arrangements are in place following the international standards on auditing.
- (g) *Fraud and corruption.* Adequacy of regulatory and institutional arrangement to prevent, detect, investigate, and sanction cases of fraud and corruption.

8. A conclusion is drawn on the residual risk after combining the inherent and control risks in the country’s PFM system as mitigated by the combination of the government’s PFM reforms measures, the proposed mitigation measures, and the World Bank supervision efforts.

Institutional Arrangements

9. The Program is implemented by MAER, MEPA, and their affiliates, such as their central and regional departments, ISRA, ANCAR, and ANIDA.



B. Review of Public Financial Management Cycle

10. This section reviews critical aspects of PFM and assesses the capacity of the implementing entities to plan, record, control, and manage all Program resources and produce timely, understandable, relevant, and reliable financial information to stakeholders for monitoring and audit.

Planning and budget

11. **The budget planning framework is robust, and program-based budgeting has been introduced.** In compliance with the 2009 WAEMU Directive on PFM and the PFM organic Law n° 2020-07 of 26 February 2020, the 2020 budgets of all line ministries, including MAER and MEPA, have been prepared in a program-based format. This major change aims to increase the links between public policy objectives and resource allocation and institutionalize the results-based approach in public resource management. All RAs and result indicators supported by the Program and the corresponding resource allocations are not yet comprehensively included in the 2020 budget approved by Parliament in December 2019 and the three-year Medium-Term Expenditure Framework (DPPD, 2020–22). As result, adjustments to the DPPD will be undertaken during the budget revision process, since the planning process is dynamic. In future years of Program implementation, to further enhance the policy alignment of the budget, technical assistance should be provided to MAER and MEPA. In addition, the year n+1 draft program budget, PAP, and DPPD shall be shared with the World Bank for discussion and technical advice to ensure with the government that the planning and budgeting document includes RAs, results indicators, and budget allocation for the World Bank–financed portion of the Program .

12. **The realism of the medium-term expenditure framework and budget for agriculture has improved but is still moderate.** The MAER and MEPA Medium-Term Expenditure Frameworks (DPPD, 2020–22) are aligned globally with sectoral strategies such PRACAS II, PNDE, LPSDA, and LPDE extension. PRACAS II and LPDE extension are yet to be approved, however, and the DPPD 2020–22 timeframe is inconsistent with the timeframe of the World Bank–financed operation (2020–25), which is over two years longer. As result, there are no estimates of government expenditures for the last two years of the Bank-financed operation. Looking back, a comparison of the initially approved budget for agriculture in 2017 and the revised budget in 2018 indicated noteworthy deviations (-4 percent in 2017 and +27 percent in 2018, Table 4.1) in 2018, mostly due to an increase in subsidies to the sector. For MAER, budget performance decreased slightly in 2018, standing at 91.44 percent compared to 97.65 percent in 2017 (Table 4.1). For MEPA, the deviation between the initially approved and revised budget was marginal in 2017 (0.6 percent) and 2018 (-2.7 percent) (Table 4.2), whereas budget execution performance improved from 77.27 percent in 2017 and to 100 percent in 2018 (Table 4.2).

13. This information highlights the need to further improve the credibility of the budget. The analysis suggests that multiple factors require attention, such as inadequate costing, shortcomings in procurement planning and implementation, changes in priorities, and lack of capacity to plan for complex projects. The Program has embedded actions to enhance the realism of the multiyear expenditure plans, such as: (i) approval of the PRACAS II and LPDE to signal high-level commitment to deliver the strategic objectives for the sector; (ii) Government's commitment to allocate resources at a level consistent with the delivery of Program results over the five years of the Program as reflected in the Program expenditure framework; and (iii) the PAP stipulating that the initially approved annual Program budget should not deviate by more or less than 3 percent to comply with best international practice.

**Table 4.1: Budget deviation, MAER and MEPA, 2017 and 2018**

	2017	2018
MAER		
Initially approved budget	71,307,209,000	72,886,352,000
Final budget appropriation	68,609,526,031	92,515,970,878
<i>Variation</i>	-4%	+27%
MEPA		
Initially approved budget	2,606,901,740	4,620,973,850
Final budget appropriation	2,621,901,740	4,745,868,277
<i>Variation</i>	0.6%	-2.70%

Source: MAER and MEPA.

Table 4.2: Budget execution performance, MAER and MEPA, 2017 and 2018

	2017	2018
MAER		
Budget	68,609,526,031	92,515,970,878
Execution	59,602,658,646	84,597,541,968
<i>Budget performance rate</i>	97.65%	91.44%
MEPA		
Budget	2,621,901,740	4,745,868,277
Execution	2,025,966,152	4,745,846,533
<i>Budget performance rate</i>	77.27%	100.00%

Source: MAER and MEPA.

14. **Line ministries have limited authority over externally financed portions of the budget and could impede the newly introduced performance-based budgeting.** While the transition to program-based budgeting has devolved commitment authority (*Ordonnateur de crédit*) to the line ministries with respect to internally financed budget expenditures, the budget for externally financed investment projects and civil servant wages is still centralized at the Ministry of Finance and Budget. The official reason is the need to control the sustainability of external borrowing, but it entails an additional layer of authority that could prevent MAER and MEPA from achieving the overall objectives of the Program. As the PforR is providing financial incentives aligned to selected government budget lines to implement the government's own program, during the

Box 2: Procedures for budgeting

In the planning and budgeting process, procedures for including funds received after achieving DLIs or funds advanced prior to achieving DLIs will comply with the budgetary regulations being updated by MPB after the move to program-based budgeting in 2020. During the planning and budgeting process, implementing line ministries shall include in their respective budget the overall resources needed to deliver the PforR results. Funds flow from World Bank forecast will be based on the annual work plan for the PforR, the DLI disbursement timeline, and the need or not to request an advance. Upon adequate justification and agreement with the World Bank, the Government can request an advance of up to 25 percent of the total financing of US\$150 million (namely, US\$37.5 million). The World Bank, based on the rationale provided by the Government, could decide to advance less than the amount requested. In case the budget allocation to the program is not adequate, the MFB in consultation with MAER and MEPA or other involved line ministries will use the appropriate regulatory effective means to open corresponding budget appropriations to allow the line ministries to commit funds and make payments order.



budget preparation process, the MAER, MEPA and other implementing line ministries should budget the overall budget allocation needed to achieve the program objectives and in line with the program expenditures framework. Box 2 describes the budgeting procedures to be used for implementing PforR activities and for disbursements following the achievement of DLIs.

Procurement planning and management

15. No high-value contract with a value exceeding the OPRC threshold is identified under the Program procurement plan. A high-value contract is defined by the PforR Policy and Directive as “an individual contract’s estimated monetary value is equal to or more than 25 percent of the estimated total Program expenditures” or “contracts with estimated values exceeding the monetary amounts, as may be amended from time to time, that require mandatory review by the Bank’s OPRC.” High value contracts are those involve the procurement of: (1) works, estimated to cost [US\$50,000,000] equivalent or more per contract; (2) goods, estimated to cost [US\$30,000,000] equivalent or more per contract; (3) non-consulting services, estimated to cost [US\$20,000,000] equivalent or more per contract; or (4) consulting services, estimated to cost [US\$15,000,000] equivalent or more per contract.

16. The procurement planning of the implementing line ministries is globally adequate. The procurement plan is developed by the implementing entities based on the approved budget and activities. No commitment above budget appropriation is allowed without budget reallocation or increase by authorized persons or institutions. MAER and MEPA and other line ministries are responsible every year for preparing the consolidated project procurement plan as well as a general procurement notice. These two documents are submitted to Central Public Procurement Department (DCMP) for approval according to Article 6 of the national Procurement Code (Decree No 2014-1212 of September 22, 2014), stating that when establishing their budget, the contracting authorities assess the total amount of spending on supply contracts (by product category), service contracts (by service category), and works contracts planned for the year and draw up a procurement plan including all of these markets, following a standard model designed by Public Procurement Regulatory Authority (ARMP). The Procurement plans are revisable.

Contract administration, procurement procedures, and capacity

17. Capacity at MAER and MEPA (the implementing contracting authorities for the PforR) for contract management is limited. MAER and MEPA have established their respective Procurement Commission Boards (*Commission des Marchés*) and Procurement Units (*Cellule de Passation des Marchés - CPM*) but lack technical resources for effective contract management. The Program will support the MAER and MEPA to strengthen their capacity by developing (i) a contract framework agreement and (ii) training in contract management and procurement planning. The training will improve the quality of procurement plans by increasing their realism and alignment toward the achievement of Program results.

18. The procurement procedures are robust, but shortcomings persist. The Program's resource-based procurement will follow the national procedures of Senegal embedded into the 2014 procurement code developed in line with the WAEMU Directive. Many assessments by the WBG or other development partners such as AfDB have considered the system to be effective and aligned with international best practices. The methods used to procure works, goods, and services as well as the bidding documents are generally consistent and acceptable. The open bidding is the default mode, the restricted invitation bidding/ Request for Price Information (DRP) is a derogation supervised by the “Direction Centrale des



Marches Publics” DCMP in accordance with the provisions of article 73 of the National Procurement Code. Declining numbers of single-source contracts (9 percent in 2017, compared to 17 percent in 2015) reported by ARMP are a sign of greater transparency and competition, which are essential for value for money, but concerns remain over poor transparency, inefficiencies, and low procurement capacity. Six areas prioritized for improvement were identified based on the OECD Methodology for Assessing Procurement Systems: (i) absence of a national strategy or plan to implement sustainable public procurement in support of the PSE; (ii) withdrawal of the Dispute Resolution Committee (CRD) from disputes between administrative entities; (iii) granting procurement units and their staff the professional status to exercise their internal control functions adequately (with the independence and continuity required for that function); (iv) the data provided by the information system do not allow performance to be measured either at the procurement stage or the execution stage (for example, data are lacking on parameters such as the duration of the various stages of the procurement cycle, levels of participation, economic efficiency of acquisitions, unit prices for common categories of goods and services, execution and payment times, and so on); (v) the contracting authorities do not conduct market research to define optimal procurement strategies; and (vi) the Investigation and Inspection Unit (CEI) should systematize in-depth investigations when audits report serious breaches of the regulations and submit the results to the relevant administrative authorities.

19. The measures proposed to address these shortcomings are to: (i) update the text governing the Court of Auditors to allow the Dispute Resolution Committee (CRD) to make a direct referral to the Chamber of Financial Discipline of the Court and (ii) deploy Integrated Public Procurement Management System (SYGMAP) and the new IFMIS to all contracting authorities to facilitate data collection for informed decision making.

The integrity of the procurement process is guaranteed via ex ante and ex post control

20. **Ex ante control:** To facilitate the review of procurement for the proposed Program, the DCMP prepared guides that describe the points of control. The DCMP and Procurement Units are responsible for ex ante control. The ex-ante control thresholds of contracts are fixed by MFB Order. A 2013 World Bank study of the implementation of investment budgets in WAEMU countries concluded that ex ante review thresholds were low and that this control delayed budget implementation. Two key recommendations of this study were to: (i) to set timelines for ex ante review and (ii) raise ex-ante review thresholds. Senegal implemented these recommendations, and Ministerial Order No. 001016 of 7 January 2015 set new thresholds for DCMP ex ante review: (i) 300 million XOF for works contracts, (ii) 200 million XOF for supply contracts, and (iii) 150 million XOF for contracts relating to services (including intellectual services). Contracts below these thresholds are subject to the internal control of the Procurement Units of contracting authorities. These units are supervised by the DCMP, but some lack the capacity to carry out this mission.

21. **Ex post control:** The ARMP is responsible for ex post control. Under Article 145 of the Public Procurement Code, in addition to its advisory role, the ARMP is mandated to conduct annual audits of contracts awarded by all contracting authorities. The ARMP practice is to recruit private firms to audit contracts on an annual basis. The sample for this audit is based on the annual budget allocated to contracting authorities. For example, only 25 percent of the contracting authorities with an annual budget



of less than 5 billion are audited per annum. Of the 200 or so audit reports published on the ARMP website from 2013 through 2017, the sample only twice included MAER and MEPA.

22. Audits of compliance with procurement procedures for 2017 produced very satisfactory results. The audits examined 3,326 contracts covered by 126 contracting authorities for a total value of 1,798.8 billion XOF. In general, the contracting authorities have shown a real commitment to complying with procurement rules, transparency and mastery of procedures, and efficiency in procurement and the fight against corruption. Open Invitations to Tender represent 92 percent of contracts in terms of value, although in terms of the number of contracts, 45 percent of the procurement procedures involved Requests for Information and Prices for restricted competition.

23. **The authority to approve contracts is defined based on the contract amount.** The Public Procurement Code, Article 29, empowers the Minister of Finance to approve contract when the amount is equal to or greater than 300 million XOF; the spending Minister approves contracts when the amount is equal to or greater than 100 million XOF but lower than 300 million XOF.

Contract administration

24. Title IV of the Procurement Code describes the contract performance conditions, while Title V refers to contract cancellation procedures and penalties applied to the parties. The approach described seems simple and equitable. For Senegal, the study on the implementation of capital budgets in WAEMU countries highlighted two shortcomings: (i) the absence of an integrated system to trace the financial transactions related to project implementation and (ii) a lack of statistics and clarity in the definition of responsibilities. Indeed, the technical services in charge of monitoring implementation do not always have information on the effectiveness of payments. The same study revealed that owing to burdensome budget regulations, the overall payment period for capital expenditures during project implementation is still long and does not comply with contractual obligations. The payment period for providers is 30 days, on average, but can extend to 60–180 days.

25. The MAER track record in contract management reveals issues of non-compliance such as absence of the production of the quarterly reports in violation of Order No. 865 of January 22, 2015 relating to the organization and operation of the units contracting authorities' procurement, non-comprehensive archiving and classification of contract files, non-transfer of the ARMP's share of the sale of tender documents in violation of article 37 of decree 2007-576 of April 25, 2007 on the organization and functioning of the Authority Public Procurement Regulation; non return of tender guarantees after allocation in violation of Article 84 of the National Procurement Code (*Code des Marches Publics, CMP*), - non publication of the final contract award notices on the public procurement portal in violation of article 86 of the CMP; and non-publication of the restricted DRPs on the DCMP website in violation of article 78 of the National Procurement code and of decree N ° 00107 of January 07, 2015, relating to the procedures for implementing the price request (*Demande de Renseignement de Prix*) procedures in application of article 78 of the CMP, and - the execution and payment documents related to the contracts are not available or incomplete; and delays in the execution of certain contracts.

26. The direct consequences of this finding are that: (i) suppliers are reticent to participate in a request for tender when a contract is financed through public funds, and they no longer trust in the reliability of government commitments; (ii) tenders are higher because suppliers justifiably estimate the cost of



payment delays and include it in their proposals (for example, the costs of securing rolling stock, storage, placing resources on hold, and possible bank charges related to loans and various guarantees); (iii) suppliers whose tenders are accepted and have limited financial capacity may have to interrupt the works or confiscate the supplies to be delivered pending payment, which can lead to serious delays; and (iv) the contract authorities do not apply penalties to ongoing contracts because the government's commitments are not fulfilled, and the interest on delayed payment stipulated in the contracts is never paid.

27. MAER and MEPA do not have a manual for implementing procurement. Manuals should be prepared defining the cycles, timelines, and supporting documents related to payment operations from the standpoint of preventing and managing procurement risk.

Procurement complaints handling

28. **A process for handling procurement complaints exists.** In Senegal, a provider may submit a complaint both during the procurement phase and during the contract performance period. During the procurement process, three levels of complaints are possible: (i) an appeal to the contracting authority for reconsideration; (ii) a contentious appeal to the CRD; and (iii) a legal remedy sought in the relevant court. Articles 89–92 of the Public Procurement Code describe the levels of redress and prescribed timelines for each actor. The "Tenderer's Guide" prepared by the ARMP clarifies that redress during the procurement phase may involve all stages of the process. The Public Procurement Code provides for two levels of complaint during the contract performance: (i) amicable settlement before the CRD and (ii) contentious appeal before the relevant courts, tribunals, or arbitration court, in accordance with the conditions set by the Organization for the Harmonization of Corporate Law in Africa (OHADA) Uniform Act.

29. **The dispute resolution decision is transparent, but the cost may limit access to the dispute resolution system.** The ARMP website publishes all dispute settlement decisions taken by the CRD and publishes statistics on applications for redress every year. In 2017, the CRD issued 105 provisional suspension decisions and 191 final decisions, including 180 relating to appeals concerning procurement procedures. Another consideration is that during the procurement phase, suppliers must pay a deposit before the application for redress is considered. This deposit is meant to discourage the submission of groundless grievances but could also represent an obstacle for suppliers.

Treasury management and funds flow

30. **The Treasury Single Account (TSA) framework is operational, although the payment timeline should be improved.** Payments are made for all implementing entities by the Treasury, which operates the main TSA. Line ministries have reported some delayed payments following cash flow issues arising when the mobilization of domestic revenue was lower than anticipated, inadequate monitoring by the National Treasury due to an absence of a dedicated accountant and the unreliable cash flow need forecast. While comprehensive and detailed information do not exist on the amplitude of the delay, interviews suggest some invoices for services or goods delivered have not been paid for almost a year or more. These shortcomings at the National Treasury could affect overall Program implementation performance. To enhance cash management, the National Treasury should appoint dedicated accountants to be the focal points for payments requested by each implementing line ministry. At the same time, advanced cash flow management requires a more granular commitment management by the line ministries. The National Treasury has embarked on reforms to support line ministries in developing quarterly commitment plans.



MEPA, MAER, and the National Treasury have also agreed to prepare a quarterly statement of pending payments that are overdue. The statement will provide a better picture of payment performance and allow more effective decision making to address any significant exceptions noted.

31. Funds will flow from the World Bank to the Program dedicated program account to be opened at the Central Bank of West African States (BCEAO) by the Ministry of Finance. From the Dedicated account at BCEAO, funds will be transferred in a timely manner to the operating account opened at the National Treasury to serve the purpose of honoring line ministries payment obligations under the program. Line ministries will comply with national procedures to issue payment orders to the National Treasury in charge of making payment. On a quarterly basis, the National Treasury will inform line ministries involved in the PforR implementation of the account balance and transactions on the account. The roll out of the new IFMIS should ease gathering and reporting on the status of payment orders as it embeds features that allow the line ministry DAGE to have real time information on payment status.

Accounting and financial reporting

32. **The accounting and financial reporting standards are adequate.** The PFM Law adheres to accepted accounting standards. The budget classification system is comprehensive and consistent with international standards. The budget is prepared in compliance with the International Monetary Fund's Government Finance Statistics Manual. The Chart of Accounts allows the preparation of a full set of financial statements in accordance with the International Public Sector Accounting Standards, cash basis. However, line ministries do not produce individual financial statements as the Commitment and payment authority is centralized at the Ministry of Finance. As result, the assessment could not judge the reliability of such a line ministry financial statement. The expected implementation of the decentralized commitment in 2020 thanks to the budget program could enable line ministries to prepare their individual administrative accounts (*compte administratif*) which will be audited by the Supreme Audit Institution.

33. Since the line ministries are not required to prepare a full set of financial statements, including statements of revenue and expenditures, financial position, statement of cash flow, and notes to the financial statement, for the purposes of the proposed Program, a fit-for-purpose annual financial statement format that will be subject to external audit has been agreed upon during negotiations. Each line ministry (MEPA, MAER, Ministry of Finance and Ministry in charge of Trade) will prepare its fit-for-purpose financial statement under the responsibility of DAGE. Other line ministries will submit their financial statement to the MAER DAGE not later than two months after the end of the period for consolidation. The fit-for-purpose financial statement will be prepared each semester and will feed the program progress report. The annual fit-for-purpose financial statement will be subject to external audit by the Supreme Audit Institution (SAI) with the support of a private audit firm. The information to prepare the fit-for-purpose financial statement will be extracted from the new IFMIS.

Internal control and internal audit

Internal control

34. **The overall internal control framework is acceptable even though some shortcomings exist.** The PFM regulations establish the clear segregation of duties between the chief budget manager, accountant, and internal auditor, and they clearly describe the procedures applied to the budgeting, accounting, and financial reporting chain. The regulations also stipulate the processes and procedures to be followed by



the implementing line ministries to ensure adequate monitoring and safeguarding of assets. Internal control is reinforced by using a digital information system to manage public resources. The transition to program-based budgeting has entailed the creation of new key positions to improve the performance of the PFM, including the positions of Program Manager and Financial Controller. Nonetheless, the main weaknesses of the internal control systems of the line ministries are: (i) the absence of detailed fiduciary management procedures; (ii) lack of an officially appointed Program Manager and Management Accountant (*Controleur de Gestion*); (iii) vacant Internal Inspection positions, and (iv) delayed roll out and effective use of the new integrated IFMIS to manage public resources. Filling these critical vacant positions, developing a detailed fiduciary manual of procedures, and the use of the new IFMIS will enhance the internal control of the implementing line ministries. The IFMIS will replace Integrated Public Financial Management System—SIGFIP (budgetary module) and the accounting system (accounting module).

35. All Financial management positions are filled at MEPA, whereas two remain vacant at MAER. The staff are qualified but there is substantial turnover owing to the absence of a career path and the relatively lower level of remuneration in these ministries compared to some others. Addressing such issues would require broad civil service reforms that are far beyond the scope of the proposed Program.

Internal Audit

36. **The internal audit function exists at the level of the implementing entities, but capacity gaps persist.** The internal audit function is critical to ascertain the efficacy of internal control and is crucial in ensuring the effective and efficient use of public funds. The internal audit function is performed by ministerial in-house inspectorates (an inspectorate of Administrative and Financial affairs, seconded by a Technical inspectorate) which have developed a risk-based audit approach with the support of the State Inspectorate (IGE). The internal audit function reports to the line ministry but the internal audit annual work plan and reports are shared with the line ministry and the National Office of the Inspector General (IGE). The Coordination and Monitoring Office within the Presidency Secretary General and the IGE monitor the implementation of internal audit recommendations. High turnover occurs in the internal audit function due namely to the absence of a career path and pay incentives. For instance, the three open positions at MEPA have been vacant for more than one year but recently filled in February 2020 while three positions are still vacant at MAER. There is no internal audit performed on the program or other programs managed by MEPA and MAER to highlight key findings and recommendations. In addition, countrywide, the internal audit is focused more on compliance audit, which limits its effectiveness in the context of program-based budgeting. Additional reforms are needed to further professionalize the internal audit function and offer a clear career path, establish recruitment criteria based on adequate qualifications and experience, create a continuous professional development plan, revise the performance audit manual, and provide substantive technical support to map or update the internal audit risks, produce a multiyear risk-based audit plan, and undertake performance audits of implementing entities. Professionalization is a broader reform to be initiated with the IGE and is beyond the scope of the proposed Program. Nonetheless, the Program will support the capacity-building activities to enhance performance audit under the Program.

Program External Audit

37. **The Supreme Audit Institution (SAI) is mandated to audit all public revenues and expenditures but encounters human resources capacity constraints that could prevent a timely financial audit of the**



Program. The SAI has a threefold mission: (i) a jurisdictional mission to verify the public accounts; (ii) responsibility for the external technical audit of all structures benefiting from public funding; and (iii) a mission to support and advise Parliament. The SAI has developed an acceptable audit methodology compliant with the International Standards of Supreme Audit Institutions but staffing constraints and limited financial independence could prevent the SAI from auditing the Program adequately and providing timely audit reports. For this reason, an independent private audit firm will be recruited under the oversight of the SAI to perform the financial audit of the proposed Program. The SAI will conduct a quality assurance review of that audit and sign off on the final report. The Program will allocate financial resources to support the SAI fulfil its role.

38. The Program audit report will be conducted according to specifications in ToRs agreed with the World Bank. The audit reports shall be submitted to the World Bank not later than nine months after the end of the fiscal year. In compliance with the World Bank policy on access to information dated July 2010, the audited program financial statement will be publicly disclosed.

Governance and Anti-corruption (GAC)

39. Senegal is a strong regional performer with respect to combating corruption. Senegal ranked 67th of 180 countries included in the Transparency International *Corruption Perceptions Index 2018*. The institutional and regulatory frameworks to investigate, prosecute, and prevent fraud and corruption are comprehensive but suffer from ineffective enforcement. Line ministry inspectorates, the IGE, the National Office for Combating Fraud and Corruption (OFNAC), ARMP, National Financial Intelligence Processing Unit (CENTIF), and National Committee to Eliminate Non transparency, Corruption, and Embezzlement (CNLCC) are empowered to prevent and act on cases of fraud and corruption. A vibrant civil society, traditions of respect for the rule of law, and a democratically elected government are also enabling factors. OFNAC has set up a toll-free phone number 800 000 900 to report cases of corruption. Corruption is diminishing gradually as economic and political development continue, yet it remains a societal problem. For example, a Civil Forum drew a very bleak picture of the distribution of agricultural inputs in several areas (*de Boule, Mbirkilane, Kaffrine, Malem Hodar, Koungheul; Fatick, Foundiougne, Gossas; Kahone, Kaolack and Guingueneo*), including seed of poor quality; quantities of seed lower than the expressed needs; delays in delivery of seed and other inputs; clientelism in the provision of seed, fertilizer, and agricultural equipment; suspicions of fraud in the certification of “certified” seed, and opacity in granting licenses to operators. The Program embeds a mechanism to report suspected cases of corruption and fraud, report on the status of investigations, and report on actions taken by the relevant stakeholders. The reporting is to be done by line Ministries DAGE, ARMP, DCMP on ad hoc basis and at least one per year.

C. Key Risks and mitigating measures

40. **The overall fiduciary risk is high.** The fiduciary system provides reasonable assurance that the Program funds will be used efficiently and effectively for the intended purpose. The main risks relate to non- alignment of policy and budget, an unrealistic budget, weak capacity to plan and manage procurement contracts, and shortcomings in cash management resulting in significant delayed payments. The effective implementation of the identified mitigation measures detailed in Table 4.3 will contribute to addressing the weaknesses identified.

**Table 4.3: Key risks identified and corresponding mitigating measures**

Risk sources	Actions to address weaknesses that will support attainment of Program objectives	PAP, DLIs, mitigating measures	Risk level	Responsible entity	Deadline
1. Planning and Budgeting -Overall FM element objective - the program budget is realistic, prepared with due regard to government policy, and implemented in an orderly and predictable manner.			High		
Weak linkage between GoS strategic priorities, MTEF, and Budget allocation for the program exists Unrealistic budget and budget cut	Budget deviation limited to +/-3% Approval of the PRACAS II and LPDE GoS to commit to comply with the program expenditures framework, consider and share with the World Bank n+1 budget document (Budget program, DPPD) during the year third quarter for technical advice PER in agriculture with a focus on selected program areas including groundnuts	Mitigating measure Mitigating measure Mitigating measure PAP		MFB, MEPA, MAER MEPA and MAER MEPA and MAER	08/30/2022
2. Accounting and financial reporting - Overall FM objective: adequate program records are maintained, and financial reports produced and disseminated for decision-making, management, and program reporting.			Substantial		
Absence of full set of comprehensive financial statement at implementing entities (line ministries)	Agree on a fit-for-purpose program financial statement	Mitigating measure		MFB, MAER, MEPA	Done
3. Treasury Management and funds flow Overall FM objective: adequate and timely funds are available to finance program implementation.			High		
Delayed funds flow to implementing entities and payment of suppliers	(i) Open a dedicated account at National Treasury for the program (ii) Devolve effectively the Commitment Authority of the overall program to line ministries (iii) Appoint dedicated accountants at National Treasury to process line ministries payments (iv) Quarterly dedicated bank account statement (v) Quarterly line ministries (MEPA, MAER) payment orders status (vi) Line ministries (MEPA and MAER) to develop Quarterly commitment plan	Mitigating measure		National Treasury, MFB MFB National Treasury, MFB National Treasury MAER, MEPA, National Treasury MFB, MEPA, MAER	30 October 2020 1st October 2020 30 June 2021 Quarterly Quarterly Quarterly
4. Internal control (including internal audit) - Overall FM element objective: there are satisfactory arrangements to (a) monitor, evaluate, and validate program results; and (b) exercise control and stewardship of program funds.			Substantial		
Vacant critical positions to manage effectively the program Turnover mainly due to underpay Lack of detailed fiduciary management system Weak capacity for performance audit by the line ministry Internal audit function	Fill the Program Manager and " <i>Contrôleur de gestion</i> " position, and vacant Internal Audit positions at MAER with qualified staff Develop and implement performance-based bonuses system Develop for the MAER a detailed fiduciary management procedure Effective use of the new IFMIS Training and hands-on support to complete performance audit	Mitigation measure Mitigating measure Mitigation measure Mitigating measure		MAER, MEPA MAER, MEPA MAER, MEPA MFB, MAER, MEPA	June 2021 December 2020 January 2021 Annually



Risk sources	Actions to address weaknesses that will support attainment of Program objectives	PAP, DLIs, mitigating measures	Risk level	Responsible entity	Deadline
5. External audit - Overall FM element objective: adequate independent audit and verification arrangements are in place, considering the country context and the nature and overall risk assessment of the program.			Substantial		
SAI financial audit capacity is limited due to resources constraint	The SAI to outsource the audit and recruit an independent external audit firm to support the SAI. The quality assurance and the signature of the report remain the responsibility of the SAI	Mitigating measure		SAI	Six months after effectiveness
Procurement No comprehensive, accurate procurement plan Limited transparency in contract award and execution	Prepare a realistic Procurement Plan to be transmitted to the ARMP no later than December 31, each year Design a framework contract for procuring Develop and implement the eProcurement system The Procurement Unit (CPM) to establish quarterly reports and annual report on the award and execution of contracts for the competent authorities and share with the DCMP and the ARMP in accordance with Articles 35 and 141 of the Public Procurement Code. The CPM must comply with the provisions of decree No. 00865 of 01/22/2015 taken in application of Article 35 and 141 of the National Procurement Code (CMP) with regard to the classification and archiving of all documents relating to contracts awarded by different departments of MEPA. In accordance with article 84.3 of the CMP, the MEPA must immediately notify the other candidates of the rejection of their offers, restore the tender guarantees and publish a notice of provisional award. The MEPA must comply with the provisions of article 86-4 of the CMP regarding the publication of final award notices on the procurement portal. Ensure compliance with the 15-day time limit set for the procurement committee to present the award proposal to the contracting authority in accordance with Article 84 of the CMP. Please communicate to the DCMP for each limited quotation (DRPCR) allocated, the list of people consulted, the name of the contractor, the nature and the amount of the contract in accordance with article 4 of decree n° 00107 of 07/01/2015 taken pursuant to article 78 of the CMP. Ensure the completeness of the filing system (classification of contracts files)	Mitigating measure Mitigation measure Mitigation measure Mitigating measure	Substantial	MAER, MEPA MAER and MEPA MAER and MEPA ARMP	Annual 30 December 2020 30 December 2022



Risk sources	Actions to address weaknesses that will support attainment of Program objectives	PAP, DLIs, mitigating measures	Risk level	Responsible entity	Deadline
	<p>The PRM of PASA must indicate its approval on the minutes of the CM award proposal to harmonize with the other structures of the ministry (DAGE and programs)</p> <p>The PRM will systematically restore the tender guarantees for unsuccessful candidates, as soon as the contract is provisionally awarded</p> <p>Article 86-4 of the CMP orders the publication of a final award notice within fifteen (15) days of notification of the contract, in accordance with article 86-4 of the CMP.</p> <p>For the purpose of publication on the public procurement site, the CPM must systematically communicate to the DCMP the information required on the DRPCRs awarded (the list of candidates consulted, the name of the successful tenderer and the nature and amount of the contract)</p> <p>CPMs should periodically prepare quarterly procurement and performance reports for the attention of the CA for transmission to DCMP and Applied ARMP. The annual report on all management markets must be sent to the DCMP and the ARMP no later than March 31 of the following year.</p> <p>The Department must comply with the deadlines prescribed by the CMP in articles 70 and 84.3, between the opening of tenders and the provisional award.</p> <p>The Ministry must ensure that it concludes its contracts awarded by call for tenders in an emergency procedure within the time limits set by the Public Procurement Code.</p>				
Fraud and Corruption Risk of fraud and corruption affecting the program not identified	Report cases of fraud and corruption related to all programs financed by DPs and GoS	Mitigating measure	Substantial	ARMP, MEPA, MAER	Annually
Integrated Fiduciary Risk			High		

D. Implementation support

41. The fiduciary team will work with the Borrower to monitor implementation progress and address underperforming areas identified in the PAP. Fiduciary support includes progress and working with the task teams to examine the achievement of DLIs and elements of the PAP that are of a fiduciary nature: (i) helping the borrower resolve implementation issues and carry out institutional capacity building; (ii) monitoring the performance of fiduciary systems and audit reports, including the implementation of the PAP and mitigating measures; (iii) monitoring changes in fiduciary risks to the Program and, as relevant, compliance with the fiduciary provisions of legal covenants; and (iv) participate in field missions twice every year.



ANNEX 5. SUMMARY ENVIRONMENTAL AND SOCIAL SYSTEMS ASSESSMENT GROUNDNUT COMPETITIVENESS AND AGRICULTURE DIVERSIFICATION PROGRAM FOR RESULTS

1. The ESSA was prepared to assess Senegal's authority and organizational capacity to achieve environmental and social objectives against the range of environmental and social impacts that may be associated with the proposed Program. This assessment is undertaken against a set of core principles set out in the Operational Policy on Program for Results Financing (OP/BP 9.00). The ESSA reviews existing policies and regulations, their practical applicability, institutional capacity, and the effectiveness of implementation in practice. The ESSA highlights the areas where the management system lacks the regulatory authority or organizational capacity to effectively manage environmental or social effects and proposes a number of actions for inclusion in the overall Program Action Plan to enhance environmental and social management and outcomes.
2. **Environmental risks and impacts.** The environmental issues associated with the Program are related to the potential increase of water, fertilizer and pesticide use resulting from the intensification of the targeted value chains (groundnuts, horticultural crops and milk production). As designed, the Program represents a positive response to these environmental issues as it promotes the use of certified seeds, the efficient use of water and agricultural inputs, enhancement of pasture management and improved land management practices. It also supports the adoption of CSA. The support to the irrigation sector focuses on improving water management by small-scale farmers. This has multiple benefits in the form of more productive and efficient use of water, decreased salinity, improved crop yields, and increased farm income. The ESSA found that the applicable Environmental and Social Management systems in Senegal are generally appropriate and comprehensive. The systems are in many respects consistent with the principles and attributes of a well-functioning system as defined by the core principles set out in the PforR Policy. However, the institutions, processes and procedures at the national and regional levels often lack the human, material and financial resources to operate effectively. Hence the environmental and social management system is in place but its implementation in practice is often less than effective.
3. **Social risks and impacts.** The main identified social risk is a poorly managed and monitored land acquisition process, that can lead to loss of access to resources and livelihoods and / or displacement. This risk is major, given that the capacity of the different partners (particularly the decentralized structures) is weak. The unfamiliarity of the staff (of these deconcentrated units and services) with the tools such as the sorting form, data collection and analysis processes, including their difficulties to develop terms of reference, and the absence of environmental and social monitoring system is a handicap. Other aspects to consider are: (i) in the Senegalese legislation, persons or infrastructures displaced from the public domain, are not entitled for compensation; (ii) vulnerable and disadvantaged people can be excluded from the project; and (iii) informal occupants are also at risk.
4. To comply with the World Bank policy requirements, the project will exclude all activities that expose people to expropriation. Further, some mitigation measures include:
 - A preliminary selection of activities that exclude land mobilization with potential negative social impacts such as expropriation and large-scale resettlement;
 - An effective compensation mechanism;
 - Capacity building of actors at the national and decentralized levels;



- Informal occupants should be considered as affected. Where necessary, this category should receive compensation and assistance for resettlement as well as the restoration of their economic situation; and
- Ensure the participation of vulnerable and marginalized groups.

5. The ESSA includes a list of the investments that are excluded from financing. This Program is not expected to finance large infrastructure, expansion of agricultural land or any expansion of irrigation networks. The ESSA notes that the promotion of water resource efficiency and increased land productivity is not expected to have substantial downstream impacts in terms of water quantity and quality. However, the intensification of the groundnuts, horticultural crops and livestock value chains may result in increased use of fertilizers and pesticides.

6. **Appropriateness of applicable systems.** The applicable Environmental and Social Management systems in Senegal – from a legal, regulatory and institutional perspective – are considered to be generally appropriate and comprehensive. The Senegalese legislation on environmental and social management is relatively well developed, with several legal texts and documents which cover the aspects of the subject-matter. The scope of the legal and regulatory systems is adequate to address underlying E&S risks, therefore, no significant changes to the overall structure of these management systems are required or proposed. The systems are in many respects consistent with the principles and attributes of a well-functioning system as defined by Bank Policy. The national Environmental Impact Assessment system, in place since 2001, was strengthened several times over the past few years; it is currently considered adequate for the management of environmental impacts of new projects subjected to EIA. In addition, capacity and expertise is available in Senegal in both public and private sectors. There are several engineering and consultancy firms with solid professional experience in environmental and social management. The national and regional institutions (MAER and MEPA) directly concerned with the implementation of this program have at the central level, a designated specialist in charge of sustainable management of agricultural resources. This specialist coordinates the interface between projects and programs in the areas of sustainable land management, water resource mobilization, fertilizer and pesticide management.

7. **On social issues,** in terms of information, public consultations and grievance management, the mechanisms set up for citizen participation at the local level, are moderately effective. In terms of social management, there are many similarities between the national legal framework and World Bank policies and procedures. However, Senegalese law is more restrictive in that it focuses on formal rights holders, whereas WB policy does not make this distinction and includes people with no formal rights or title to the land they occupy. The WB policy considers not only formal owners, but also customary owners and those without any ownership rights over the land they occupy

8. **Weaknesses and shortcoming of applicable systems.** The Systems assessment reveals some weaknesses and shortcomings in the key institutions, processes and procedures described as follows:

- The Department of Environmental Impact Assessments (*Division des Evaluations d'Impact Environnemental, DEIE*) has limited qualified staff with the necessary technical capacity to conduct an Environmental Impact Assessment. The level of staffing is largely insufficient to



properly handle the department's regular workload and requests for environmental and social assessments.

- The Regional Departments of the Environment and Classified Establishments (*Divisions Régionales de l'Environnement et des Établissements Classés - DREEC*), lack the necessary, human, financial and logistical resources to properly conduct their projects and programs' environmental and social monitoring duties.
- The National Technical Committee for the management of environmental impact studies, whose members are designated by their respective institutions and are not always available to fulfill this very important function.
- The Regional Committee for Environmental and Social Monitoring (*Comité Régional de Suivi Environnemental et social, CRSE*) focuses on EA validation and its members rarely participate in field missions on Environmental Management Plan (EMP) monitoring. It is therefore important to define roles and responsibilities of various stakeholders and strengthen their technical capacities to ensure better monitoring of EA procedures.
- The key stakeholders in charge of steering the Program that is the focus of this ESSA, notably the DRDRs and SRELs, have experience only through their participation in the regional committees for EA validation and environmental and social monitoring of projects and programs. However, the results of the consultations showed that these entities have very limited knowledge in the environmental and social management of interventions in the agriculture and livestock sectors. Thus, technical assistance and capacity building needs have emerged among these key stakeholders to develop a better understanding of the issues, procedures, standards and approach to be adopted in program implementation.
- The main weaknesses at the level of the local and territorial authorities relate to the lack of technical expertise, funding and training opportunities in environmental and social monitoring activities and land management services in the program intervention zones.
- The Regional Development Agencies (*Agences Régionales de Développement, ARDs*) do not yet have a procedural manual to help optimize the administrative, technical and financial management of their interventions. ARDs have limited qualified staff for environmental and social management.
- Lack of funding for training and knowledge transfer on environmental management and quality of life and for the coordination of environmental and social monitoring activities at the Territorial government level.
- Despite the emphasis on public hearings, populations are still not consulted on planned developments in their respective localities, which hinders their ability to take ownership.
- The Senegalese legislation is not up to date in terms of the reference frameworks for calculating compensation. The texts governing compensation scales are very often obsolete and the prices indicated rarely reflect market prices. WB policy considers that the evaluation of losses should be based on the market price. From this point of view, the people affected stand to lose out.
- Lack of guidance and information on citizens' participation in municipal investment and development activities and the absence of recourse to clearly defined mechanisms for grievance resolution.



- With regard to project implementation, the absence of an environmental and social supervision and monitoring system constitutes a weakness. National and regional institutions, like local governments and involved ministries, have a shortage of technical managers able to efficiently carry out this function; while they may systematically resort to external engineering firms, it does not guarantee consistency and continuity.
- Compared to the northern part of the country, the local authorities in the areas targeted by the program have not benefited from any strengthening in land management. Consequently, they will have to be strengthened in order to accompany the program in the process of securing already existing rights (registration of usage rights, regularization, recording of subsequent transactions and updating of the communal land database).
- The institutions, processes and procedures at the national/regional levels often lack the human, material and financial resources to operate effectively. Hence, the Environmental and Social management system is in place but its implementation in practice is often less than effective.
- Beyond limitations in human resources, these institutions lack a comprehensive guide on environmental and social management of local investments.

9. **Consultation and disclosure of the ESSA.** The preparation of the ESSA was carried out in a participatory manner, involving feedback and input from the key stakeholders; including the private sector, central government, regional authorities, academia, local communities, development partners, and civil society. The World Bank team collected information relevant to the assessment and carried out field visits to interact with local and regional authorities and the main stakeholders. A first draft ESSA was shared with MAER and MEPA on January 9, 2020. Consultations on this first draft involving all stakeholders took place in the areas covered by the Program (Kaolack, Diourbel and Louga) from March 10-12, 2020. The ESSA was revised to reflect their concerns expressed by incorporating suggestions both in the text of the ESSA itself as well as on the more substantial recommendations and proposed actions.

10. A virtual public consultation workshop took place from March 30, 2020 to April 8, 2020, taking into account national restrictions and minimizing direct contact with the public in order to avoid the spread of COVID-19. Participants included representatives and technical staff of government and local authorities, development partners, civil society organizations and the private sector. Their comments were incorporated into the final version of the ESSA, with a full list of participants. This version was published on MAER and MEPA websites on April 10, 2020 and disclosed at the Bank external on April 21, 2020.

11. **Proposed actions.** The proposed program can be used strategically to strengthen Senegal's Environmental and Social Management Systems by reinforcing the human, financial and logistical capacities of the key institutions to promote best practices, provide quality assurance and monitor for compliance. Beyond limitations in human resources, these institutions lack a comprehensive guide on environmental and social management of local investments. The program should invest in training technical, extension specialists and farmers in integrated soil fertility, pest and crop management for long term environmental sustainability. To improve implementation capacity, the program should conduct training in environmental risk management for the relevant departments and ensure that projects and subprojects that are subjected to the EIA procedures are adequately screened and their potential risks are managed through an Environmental and Social Management Framework. For efficient use of agricultural inputs and monitoring related environmental impacts and food safety, the program should establish



baselines for fertilizer and pesticide use and adopt an integrated approach to soil fertility and crop/pest management.

Table 5.1: ESSA action plan

N°	Measures	Activities	Responsible Entity	Timeline	Cost (\$)
1. STRENGTHENING THE ENVIRONMENTAL AND SOCIAL MANAGEMENT SYSTEM					
1.1	Technical Manual for the E&S management of the Program	<ul style="list-style-type: none"> Preparation of a Manual for MAER and MEPA and their technical services. This Manual will be an integral part of the Operational Manual. It will be the main tool to assess cumulative impacts and recommending mitigation measures to be implemented for those impacts. 	TCT / Direction de l'Environnement et des Etablissements Classés -DEEC / Division Régionale de l'Environnement et des Etablissements Classés -DREECs	In the first half of the year after the commencement of the program	To be taken into account in the POM
1.2	E&S specialist	Recruitment of an environmentalist and a sociologist-anthropologist to support the TCT.	TCT	At the start of the Program's implementation	500,000
1.3	Complaint Management	Establishment and disclosure of a simple and effective complaints management system within each program intervention area and definition of a system for tracking claims	Each structure involved including OP and Organization of Civil Society (OCS) with the support of the TCT	During the third quarter after the commencement of the program	To be taken into account in the POM
2. CAPACITY BUILDING IN ENVIRONMENTAL AND SOCIAL MANAGEMENT					
2.1	Information and Awareness	Organization of periodic sessions aimed at raising awareness and providing information on the environmental and social issues of the Program's structural activities, and regularly strengthening citizen involvement. This includes, inter alia, the publication and dissemination of procedures concerning the environmental and social management of sub-projects and decisions on approved projects.	TCT in collaboration with DRECC, OCS and other relevant structures and the different departments of the Ministry of Environment and Sustainable Development (MEDD)	Especially in the first year of the Program and throughout the duration of the program.	2,700
2.2	Specific Training	Organization of training sessions for stakeholders directly involved in the implementation of the Program's investments. On the basis of a capacity building plan, these training sessions will focus inter alia on the following aspects: <ul style="list-style-type: none"> Introduction to the Senegalese legal and regulatory framework in terms of environmental and social management; Mastering of the process of filling in the <i>Simplified Diagnostic Sheet</i> (FIDS). Monitoring compliance with Environmental & Social Policies Assessment and Review of Cumulative Impacts. 	TCT/DREEC, with specialized external technical assistance	Sessions will start in the first half of the year after the commencement of the program. Refresher sessions throughout the Program's duration. (Frequency to be determined according to the allocated budget)	45,000



		<ul style="list-style-type: none">• Mastering the preparation of an <i>Environmental and Social Information Sheet</i> (ESIS) for sub-projects with moderate to substantial environmental and social impact.• Control of the preparation of a <i>Resettlement Plan</i> (RP) for each sub-project with moderate to substantial social impacts.• Targeted training in Integrated Fertility, Crop and Pest Management in value chains.			
3. CAPACITY BUILDING FOR MONITORING THE IMPLEMENTATION OF THE TOOLS					
3.1	Monitoring	Establishment of a system to monitor and evaluate the environmental and social management of investment sub-projects and control of all mitigation measures provided for (in the ESMPs and PRs)	TCT with DEEC-DRECC. In collaboration with the Regional Environmental and Social Monitoring Committees (CRSE) of each of the structures involved. Each proponent or holder of approved sub-projects.	During the first half of the year after the commencement of the program.	25,000
3.2	Training in monitoring and control	Training stakeholders in the monitoring of social and environmental management tools, including the management of complaints and conflicts.	TCT with DEEC-DRECC. In collaboration with the Regional Environmental and Social Monitoring Committees (CRSE) of each of the participating structures.	During the first half of the year after the start of the first sub-projects and at six-month intervals throughout the program.	22,000

Key partners and agencies involved

12. Given the integrated nature of the Program, several actors will be directly involved with its implementation. The institutional structure for the Program implementation will include the following entities: (i) The MAER and its implementing agencies of central and regional directorates (in particular the Directorates of Agriculture, Plant Protection, Horticulture, Modernization of Rural Equipment, Financing and Partnership with Organizations) which will play a key role, particularly in terms of preparation and monitoring of the implementation of sub-projects aimed at operationalizing this Program; (ii) The MEPA and its implementing agencies including central and regional directorates (the Directorate of Livestock and regional services) which will play a key role, particularly in terms of preparation and monitoring of the implementation of sub-projects aimed at operationalizing this program; (iii) The Ministry of Environment and Sustainable Development (MESD) through the Directorate of Environment and Classified Establishments (DEEC) and the Regional Directorates of Environment and Classified Establishments (DRECC) which will be responsible for instruction of environmental and social assessments (ESA), the validation as well as the monitoring during implementation; (iv) The Ministry of Commerce on compliance with standards for exports of peanuts and horticultural products; (v) The Ministry of Water and Sanitation



(MWS) on the management of water resources, etc.; (vi) The Senegalese Agricultural Research Institute (ISRA); (vii) The Agricultural Extension Agency; ANIDA plays a central role in the program implementation; (viii) Department of Retention Basins and Artificial Lakes (DBRLA); and (ix) Other public sector departments and institutions (professional organizations, agri-food companies, etc.) will have responsibilities in the program implementation accordingly.

13. **Summary of proposed measures.** In view of the environmental and social risks associated with the Program, the following ESSA recommendations summarized in table 5.2 will be included in the Program design, for improved environmental and social due diligence:

Table 5.2: Summary of Proposed Environmental and Social Measures

Risk	Suggested Measures	Responsible party for implementation	Responsible entity for Monitoring and Evaluation
Inclusion of vulnerable persons, including persons with disabilities	Ensure that ramps and other access arrangements are considered in constructions	Enterprises	TCTs Decentralized environmental structures
Lack of knowledge	Build the capacity of social structures		TCTs TCTs
Appropriation of ESSA	Disseminate the ESSA and spread the information to all stakeholders involved		TCTs TCTs
Operationalization of environmental and social measures	Include in the project Operational Manual, a chapter detailing the applicable procedures related to environmental and social aspects		TCTs TCTs
Documentation of the land mobilization process	Empower local structures Inform, consult and give the PAPs an opportunity to participate in all stages of the compensation process. Allow the PAPs to express their views on the proposed options Establish a clear and transparent grievance mechanism and a conflicts management system Provide a selection of construction sites, minimizing or avoiding travel within the framework of the program using a sorting sheet Pay special attention to vulnerable and disadvantaged groups, by providing them with better living conditions and special assistance. Consider informal occupants: compensate and assist them. Adequately monitor the PAPs to ensure that they regain their pre-project living conditions, Give privilege to compensation in kind Ensure that the negotiation phase is adequate and sufficient Have copies of the indicated documents available to local structures and the MAER and MEPA Keep the World Bank informed of each land issue mobilization process through the TCTs		TCTs Decentralized structures

**ANNEX 6. PROGRAM ACTION PLAN**

Action Description	Source	DLI#	Responsibility	Timing		Completion Measurement
Establishment of the TCT within each of the two-line ministries	Technical		MAER and MEPA	Other	2 months after effectiveness	TCT in place
Recruitment of the Independent Verification Agency (IVA)	Other		MAER and MEPA	Other	3 months after effectiveness	IVA recruited
Appointment of dedicated public accountants to process line ministries payments at National Treasury and MAER Internal Auditors (Internal Inspection)	Fiduciary Systems		MAER, MEPA	Due Date	30-Jun-2021	Dedicated accountants appointed at MFB national Treasury and MAER Internal audit vacant position filled
Perform Agriculture sector PER with the Agriculture GP to deepen the analysis of the expenditures adequacy and efficiency under the Program	Fiduciary Systems		MAER, MEPA and MFB	Due Date	30-Aug-2022	PER report available for policy decision
Establishment of a Grievance Redress Mechanism (GRM)	Environmental and Social Systems		MAER and MEPA	Other	2 months after Effectiveness	GRM in place in each Ministry (MAER and MEPA)



ANNEX 7. EXPENDITURE FRAMEWORK

GROUNDNUT COMPETITIVENESS AND AGRICULTURE DIVERSIFICATION PROGRAM FOR RESULTS

1. **Expenditure Framework.** The assessment of the expenditure framework implies (i) the assessment of the adequacy of the expenditures included in the PforR Program, (ii) the analysis of the implication of the country's fiscal context on the PforR Program and any impact of the PforR Program on the fiscal outlook, and (iii) whether the medium-term budget allocated to the Program is sustainable, and whether there are major historical discrepancies between budget allocations, releases, and actual expenditures.
2. **Program expenditure framework.** The Government's program planned expenditures for the Program amount to US\$210 million for the five-year period stemming from 2021 to 2025. A significant part of the program expenditures (equivalent to US\$150 million) is planned to be financed by the PforR operation. The share by entity indicates that MAER will be allocated the biggest portion of the program expenditures.
3. **The realism of the program medium-term expenditure framework and budget has improved but is still moderate.** The MAER and MEPA 2020-2022 MTEF are globally aligned with the sectoral strategies such as PRACAS II, PNDE and Sectoral policy letters. While PRACAS II and PNDE have been validated at the national level, Government approval is ongoing. The official approval is expected during the third Quarter of the year 2020 and is more or less an administrative process which does not impair the Government's commitment and ownership to implement these two programs as demonstrated by the allocation of multiyear budgetary resources via the sectoral MTEF (2020-2022). The Covid-19 crisis is not going to affect the approval timeline. During the past two years, the comparison of the initially approved agriculture budget versus revised budget indicated a noteworthy variation (-4 percent in 2017 and +27 percent in 2018 due to an increase in subsidies to the sector). In addition, the budget performance slightly decreased in 2018 and stood at 91.44 percent in 2018 compared to 97.65 percent in 2017. For livestock, the variation between the initially approved and revised budget was marginal in 2017 (0.6 percent) and 2018 (-2.7 percent) while the budget execution performance has improved from 77.27 percent in 2017 and to 100 percent in 2018. The above highlights the need to further enhance the credibility of the budget in the sectors. Analysis suggests multiple underlining factors such as inadequate costing, shortcomings in procurement planning and implementation, changes in priorities, and lack of planning capacity for complex project. The program has embedded actions to further enhance the realism of the sector multiyear expenditures plan such as (i) Government's commitment via the Steering Committee to allocate resources consistent with the delivery of the Program results during the five years of the Program as reflected in the Program expenditure framework, and (ii) initially approved program budget not to vary +/-3 percent to comply with best international practice.
4. **Sector investment expenditures are still significantly dependent on external financing, thus making critical sectors like agriculture and livestock vulnerable to the unpredictability of external financing.** For instance, MEPA 2018 investment program was financed at 66 percent via external financing and a significant portion of the program expenditures are dependent on the World Bank financing (71.4 percent). A better prioritization of the domestic funding to the agriculture sector is needed to ensure sustainability and effective implementation of the PRACAS II and PNDE. The GoS developed a new



domestic revenue mobilization strategy to further enhance domestic revenue mobilization in order to achieve in the medium term a tax to GDP ratio of 20 percent. The implementation of this new strategy with the support of the World Bank and other Development Partners is expected to create more fiscal space needed to increase budget allocation to the agriculture sector.

5. The Program is not expected to have an impact on the country fiscal outlook which remains favorable if the country adheres to the WAEMU convergency criteria of a fiscal deficit target of 3 percent of GDP and continues to improve public expenditure efficiency to maintain public debt at sustainable levels (debt to GDP ratio is 46 percent). Recent measures aiming at a better rationalization of public administration recurrent cost such as restriction on vehicle procurement is a good policy measure that should be effectively implemented and sustained.

6. **The variation in the investment budget execution suggests effectiveness and efficiency gaps.** Cases of agriculture equipment bought (tractor and other material) without an adequate needs analysis and absence of proper maintenance cost planning are selected examples which could impede the achievement of the program results and impact the beneficiaries. In addition, the massive investment in the groundnut value chain during the period 2013-2015 did not necessarily result in an increased yield. For instance, while 137 billion CFA spent over the period do not coincide with an increase in yields (-151 kg / hectare) and production (-236,813 tones). The efficiency gap will be thoroughly analyzed during the Program implementation via a PER to inform corrective policy measure.



Table 7.1: Expenditure Framework

Result Area	Instrument	Expenditure per year					Total Expenditure			
		2021	2022	2023	2024	2025	Total Programmes (PRACASII and PNDE) Expenditures related to the	B. Government funding of the Programmes (PRACASII and PNDE)	C. World Bank (IDA) funding to the Programmes (PRACASII and PNDE)	Total cost of PRACASII and PNDE
Result area 1	PforR	24,697,094	28,457,778	28,415,043	28,415,043	28,415,043	138,400,000	46,239,316	92,160,684	400,000,000
Adequate production/ availability of certified seeds	PforR	3,418,803	3,418,803	3,418,803	3,418,803	3,418,803	17,094,017	3,931,624	13,162,393	
Access to quality inputs	PforR	-	-	-	-	-	-	-	-	-
Access to quality inputs fertilizers	PforR	6,153,846	6,837,607	6,837,607	6,837,607	6,837,607	33,504,274	13,401,709	20,102,564	
Access to quality inputs Pesticides	PforR	2,184,615	2,184,615	2,184,615	2,184,615	2,184,615	10,923,077	4,369,231	6,553,846	
Access to quality inputs (small equipment)	PforR	5,470,085	8,547,009	8,547,009	8,547,009	8,547,009	39,658,120	15,863,248	23,794,872	
Access to quality agricultural support services	PforR	1,995,487	1,995,487	1,995,487	1,995,487	1,995,487	9,977,436	3,139,829	6,837,607	
Improving animal health	PforR	3,589,744	3,589,744	3,589,744	3,589,744	3,589,744	17,948,718	854,701	17,094,017	
Increasing availability and quality of forage/fodder and feed	PforR	1,025,641	1,025,641	1,025,641	1,025,641	1,025,641	5,128,205	854,701	4,273,504	
Improving genetics for dairy production	PforR	42,735	42,735	-	-	-	85,470	-	85,470	
	PforR	93,162	93,162	93,162	93,162	93,162	465,812	465,812	-	
	PforR	56,308	56,308	56,308	56,308	56,308	281,538	281,538	-	
	PforR	49,573	49,573	49,573	49,573	49,573	247,863	247,863	-	
Improving animal housing and herd management	PforR	617,094	617,094	617,094	617,094	617,094	3,085,470	2,829,060	256,410	
Result area 2	PforR	17,574,701	9,249,915	8,856,752	8,856,752	8,856,752	53,394,872	11,965,812	41,429,060	200,000,000
Strengthening agricultural production base	PforR	4,848,205	4,848,205	4,848,205	4,848,205	4,848,205	24,241,026	170,940	24,070,085	
Improving access to agriculture insurance (Climate-risk management and efficient use of agricultural resources)	PforR	1,752,137	1,752,137	1,752,137	1,752,137	1,752,137	8,760,684	2,905,983	5,854,701	
Lifting distortive policy/regulatory measures	PforR	7,863,248	-	-	-	-	7,863,248	7,863,248	-	
Reorganization of the groundnut interprofession and establishment of PPP	PforR	854,701	393,162	-	-	-	1,247,863	-	1,247,863	
Reinforcement of agri-food product quality control	PforR	683,761	683,761	683,761	683,761	683,761	3,418,803	854,701	2,564,103	
Providing targeted support to milk producers and value chain actors	PforR	1,025,641	1,025,641	1,025,641	1,025,641	1,025,641	5,128,205	-	5,128,205	
Improving access to financial services	PforR	-	-	-	-	-	-	-	-	
Regulatory Body for the Warehouse Receipt System (DRSRE)	PforR	341,880	341,880	341,880	341,880	341,880	1,709,402	170,940	1,538,462	
Facilitating product marketing	PforR	205,128	205,128	205,128	205,128	205,128	1,025,641	-	1,025,641	
Result area 3	PforR	7,059,829	7,230,769	7,230,769	6,888,889	6,888,889	18,205,128	1,794,872	16,410,256	100,000,000
Strengthening agriculture development institutions	PforR	1,111,111	1,111,111	1,111,111	1,111,111	1,111,111	5,555,556	427,350	5,128,205	
	PforR	85,470	85,470	85,470	85,470	85,470	-	-	-	
	PforR	1,025,641	1,025,641	1,025,641	1,025,641	1,025,641	-	-	-	
Reinforcing MAER's and MEPA's technical support services	PforR	85,470	85,470	85,470	85,470	85,470	427,350	-	427,350	
	PforR	42,735	42,735	42,735	42,735	42,735	-	-	-	
Reinforcing MAER's and MEPA's program planning, statistics and M&E	PforR	42,735	42,735	42,735	42,735	42,735	-	-	-	
	PforR	2,222,222	2,222,222	2,222,222	2,222,222	2,222,222	11,111,111	1,367,521	9,743,590	
	PforR	1,196,581	1,196,581	1,196,581	1,196,581	1,196,581	-	-	-	
Livestock Master Plan	PforR	1,025,641	1,025,641	1,025,641	1,025,641	1,025,641	-	-	-	
Program Management and Monitoring (including Technical Assistance)	PforR	170,940	341,880	341,880	-	-	854,701	-	854,701	
TOTAL	PforR	49,331,624	44,938,462	44,502,564	44,160,684	44,160,684	210,000,000	60,000,000	150,000,000	700,000,000



ANNEX 8. IMPLEMENTATION SUPPORT PLAN AGRICULTURE AND LIVESTOCK COMPETITIVENESS PROGRAM FOR RESULTS

1. A multi-disciplinary set of technical specialists along with fiduciary and environmental and social specialists will be needed to support MAER and MEPA in the overall implementation of the PforR operation. While results and DLIs are planned to be assessed as completed annually, a six-month approach to implementation support will be employed where a specific implementation support mission of one to two weeks would be carried out. In addition, many technical specialists are based in the region, subregion, and country office, which will allow timely follow-up on specific issues and/or areas of concern if needed.
2. The PforR operation will require considerable, well-coordinated, timely, and focused technical support from the World Bank team, particularly during the early stages of implementation. One challenge will be to coordinate the actions agreed in the PAP with operational activities on the ground, ensuring that information flows effectively and on a timely basis between policy makers and implementation agents at the central and decentralized levels (MFB, MAER, MEPA, and regional DRDRs and DIRELs). While channels of communication are generally good within Senegal, there will be a continual flow of information to and between implementing entities during the Program relating to its implementation. The fact that PforR support staff are highly decentralized, with the task team leader and key team members based in Senegal, will facilitate overall implementation and timely communication with the GoS and the various other stakeholders involved in implementation.
3. World Bank support for implementation will emphasize helping the results-based incentive system to work to its full potential. This support will include: (i) reviewing implementation progress, including the achievement of RF targets and DLIs; (ii) providing support for resolving emerging Program implementation issues and bottlenecks, and for building institutional capacity of the key actors at various levels; (iii) monitoring the performance of systems and compliance with legal agreements; (iv) supporting the GoS in monitoring and managing changes in the various types of risks; and (v) confirming that MAER and MEPA have prepared and are implementing their own plan to enhance the relevant technical capacity development gaps identified in the Technical Assessment.
4. The key to effective implementation support by the World Bank will be its coordination and timing, which should be aligned with the critical path in the planning and verification of results for disbursement requests to the World Bank. The first implementation support mission will take place before effectiveness to make sure that the project is working toward meeting some of the dated covenants soon after effectiveness to ensure a smooth start. It is expected that, at that stage, initial progress will have been made toward achievement of the first set of results and DLIs, and achievement of a significant number of the actions in the Program. These will be reviewed during the second mission. The second mission is therefore expected to include all team members (namely, technical, institutional, private sector, environmental, social, and fiduciary specialists). Subsequent implementation support will have a stronger emphasis on verification/M&E skills and technical implementation expertise, varying according to the actual needs as specified in the PAP.
5. The World Bank team's support to the broader government program will be aligned with Technical Assistance activities supported by other development partners. In addition, Trust Fund resources will be



sought to augment the World Bank's implementation support. Table 10.1 summarizes the focus of implementation support, and Table 10.2 lists the task team skills mix required to support implementation.

Table 8.1: Focus of implementation support

Time	Focus	Skills needed	Resource estimates	Partner role
First 12 months	Implementing the PAP; agreeing the private sector leveraging strategy; establishing arrangements for credible verification of compliance with the DLIs; enhancing district and national planning and budgetary processes; strengthening the M&E system at various levels.	Legal, financial, procurement, operations, M&E; technical (capacity building, private sector, fiduciary systems, economics, access to finance, and agriculture).	Two support missions 2 x 11 people x 2 weeks = 42 weeks Total 60 weeks over 12 months	IFAD, providers of technical assistance in key areas (gender, CSA, private sector)
12–48 months	Reviewing implementation progress; cross-checking linkages between planning, budgeting, and results; providing support in case of disputes relating to DLI verification.	Legal, financial procurement, operations, M&E; technical (capacity building, private sector, fiduciary systems, economics, access to finance, and agriculture).	Two support missions 4 x 11 people x 2 weeks = 88 weeks Total 88 weeks over 12 months	IFAD, providers of technical assistance in key areas (gender, CSA, private sector)

Table 8.2: Task Team Skills Mix Requirements for Implementation Support

Skills needed	Number of staff weeks	Number of trips
Legal	2	1
Financial Management Specialist	8	
Environmental and Social field-based Specialists	6	
Procurement Specialist	6	
M&E Specialist	8	6
Capacity building/ institutions/ private sector HQ based Specialist	8	4



ANNEX 9. SENEGAL MAP

AGRICULTURE AND LIVESTOCK COMPETITIVENESS PROGRAM FOR RESULTS

