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Report No: PAD236

INTERNATIONAL DEVELOPMENT ASSOCIATION

PROJECT APPRAISAL DOCUMENT

ON A

PROPOSED CREDIT

IN THE AMOUNT OF SDR 52.1 MILLION
(US\$80 MILLION EQUIVALENT)

AND A

PROPOSED GRANT

FROM THE GLOBAL ENVIRONMENT FACILITY TRUST FUND

IN THE AMOUNT OF US\$6 MILLION

TO THE

REPUBLIC OF SENEGAL

FOR THE

SUSTAINABLE AND INCLUSIVE AGRIBUSINESS DEVELOPMENT PROJECT

November 22, 2013

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CURRENCY EQUIVALENTS
(Exchange Rate Effective October 31, 2013)

Currency Unit = CFA Francs
CFA 482.71 = US\$1
US\$1 = SDR 0,65017815

FISCAL YEAR
January 1 – December 31

ABBREVIATIONS AND ACRONYMS

AAA	Analytic and Advisory Activities
AGS	Accelerated Growth Strategy
AFD	French Development Agency
AfDB	African Development Bank
AGEROUTE	Works and Road Management Agency/ <i>Agence des Travaux et de Gestion des Routes</i>
AIDP	Agriculture Insurance Development Project
ANCAR	National Agency for Agricultural and rural Advisory Services/ <i>Agence Nationale du Conseil Agricole et Rural</i>
ANGMV	National Agency for the Great Green Wall/ <i>Agence Nationale de la Grande Muraille Verte</i>
APIX	Private Investment Promotion Agency/ <i>Agence de promotion des Investissements et des Grands Travaux</i>
ARMP	Public Procurement Regulatory Authority
ASER	Senegalese Agency for rural Electrification
BRICKS	Building Resilience through Innovation, Communication, and Knowledge Services Project
BCEAO	Central Bank of the West African States/ <i>Banque Centrale des Etats de l'Afrique de l'Ouest</i>
BDS	Business Development Services
CPS	Country Partnership Strategy
CC	Climate Change
CDH	Horticulture Development Center/ <i>Centre pour le Développement de l'Horticulture</i>
CFAHS	Horticulture Inter-Professional Cooperation/ <i>Coopération Fédérative des Acteurs de l'Horticulture du Sénégal</i>
CFPH	Horticultural Center for Vocational Training/ <i>Centre de Formation des Professions Horticoles</i>
DA	Designated Account
DAPSA	Directorate for Analysis and Prediction of Agricultural Statistics / <i>Direction de l'Analyse, de la Prévision et des Statistiques Agricoles</i>
DGID	General Directorate of Taxes and Domains
ECOWAS	Economic Community of West African States
EIG	Economic Interest-based Groups
ERR	Economic Rate of Return
ESIA	Environmental and Social Impact Assessment
ESMF	Environment and Social Management Framework

EU	European Union
FAO	Food and Agriculture Organization
FDI	Foreign Direct Investment
FCFA	Franc CFA
FOB	Free On Board
FOS	Fondation Origine Senegal
FPD	Finance and Private Sector Development
GDP	Gross Domestic Product
GEF	Global Environment Facility
GOANA	Great Agricultural Offensive for Food and Abundance/ <i>Grande offensive agricole pour la nourriture et l'abondance</i>
GoS	Government of Senegal
IBRD	International Bank for Reconstruction and Development
ICA	Investment Climate Assessment
ICB	International Competitive Bidding
IDA	International Development Association
ICR	Implementation Completion Report
IEG	Independent Evaluation Group
IFAD	International Fund for Agricultural Development
IFC	International Finance Corporation
IMF	International Monetary Fund
IPM	Integrated Pest Management
ISRA	Senegalese Institute of Agricultural Research/ <i>Institut Sénégalais de Recherche Agricole</i>
IWRM	Integrated Water Resource Management
LD	Land Degradation
LIB	Limited International Bidding
M&E	Monitoring and Evaluation
MCA	Millennium Challenge Account
MDG	Millennium Development Goals
MEF	Ministry of Economy and Finance
MOA	Ministry of Agriculture and Rural Equipment
NCB	National Competitive Bidding
NEPAD	New Partnership for Africa's Development
NPV	Net Present Value
OHADA	Organization for Harmonization of Business Law
O&M	Operation and Maintenance
OLAG	Office du Lac de Guiers
OMVS	Organization for the Development of the Senegal River Valley/ <i>Organisation pour la Mise en Valeur du Fleuve Sénégal</i>
PACR	Support to Rural Communities Project/ <i>Projet d'Appui aux Communautés rurales</i>
PCR	President of the rural community
PDMAS	Agricultural Markets and Agribusiness Development Program/ <i>Programme de Développement des Marchés Agricoles du Sénégal</i>
PIM	Project Implementation Manual
PCU	Project Coordination Unit
PMP	Pest Management Plan

PNIA	National Agricultural Investment Program/ <i>Programme National d'Investissement Agricole</i>
POAS	Land Use and Allocation Plan/ <i>Plan d'Occupation et d'Affectation des Sols</i>
PPA	Project Preparation Advance
PPP	Public-Private Partnership
PRSC	Poverty Reduction Support Credit
PRSP	Poverty Reduction Strategy Paper
PSC	Project Steering Committee
QCBS	Quality-and Cost-Based Selection
RAI	Principles for Responsible Agricultural Investment
RAP	Resettlement Action Plan
RPF	Resettlement Policy Framework
SAED	Agency for the Development of the Delta and Valleys of the Senegal and Faleme Rivers / <i>Société d'Aménagement et d'Exploitations des terres du Delta et des Vallées du fleuve Sénégal et de la Falémé</i>
SAWAP	Sahel and West Africa Program in support of the Great Green Wall
SCA	Accelerated Growth Strategy/ <i>Stratégie de Croissance Accélérée</i>
SDRs	Special Drawing Rights
SESA	Strategic Environmental and Social Assessment
SFM	Sustainable Forest Management
SLM	Sustainable Land Management
SLWM	Sustainable Land and Water Management
SMP	Small and Medium Producer
SPSCA	Permanent Secretariat of Accelerated Growth Strategy/ <i>Secrétariat Permanent de la Stratégie de Croissance Accélérée</i>
SSIAP	Senegal Sustainable and Inclusive Agribusiness Project
TA	Technical Assistance
UGB	Gaston Berger University
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Programme
USAID	United States Agency for International Development
WAEMU	West African Economic and Monetary Union
ZAPA	Zones Agro-Pastorales à Priorité Agricole
ZAPE	Zones Agro-Pastorales à Priorité Elevage

Regional Vice President:	Makhtar Diop
Country Director:	Vera Songwe
Sector Director:	Jamal Saghir
Sector Manager:	Martien van Nieuwkoop
Task Team Leader:	Jean Philippe Tré

REPUBLIC OF SENEGAL
Sustainable and Inclusive Agribusiness Project
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PAD DATA SHEET

Senegal: Senegal Sustainable and Inclusive Agribusiness Project (P124018)

PROJECT APPRAISAL DOCUMENT

AFRICA - AFTA1

Report No.: PAD236

Basic Information			
Project ID P124018	EA Category A - Full Assessment	Team Leader Jean-Philippe Tre	
Lending Instrument Investment Project Financing	Fragile and/or Capacity Constraints []		
	Financial Intermediaries []		
	Series of Projects []		
Project Implementation Start Date 19-Dec-2013	Project Implementation End Date 31-Dec-2019		
Expected Effectiveness Date 17-Mar-2014	Expected Closing Date 31-Dec-2019		
Joint IFC No	GEF Focal Area Multi-focal area		
Sector Manager Martien Van Nieuwkoop	Sector Director Jamal Saghir	Country Director Vera Songwe	Regional Vice President Makhtar Diop
Borrower:			
Responsible Agency: Ministry of Agriculture and Rural Equipment			
Contact: M. Ndiobo Diène	Title: Secretary General		
Telephone 221775693807	Email:		
No.:			
Project Financing Data(in USD Million)			
[] Loan	[X] Grant	[] Guarantee	
[X] Credit	[] IDA Grant	[] Other	
Total Project Cost:	86.00	Total Bank Financing:	80.00
Financing Gap:	0.00		
Financing Source	Amount		
BORROWER/RECIPIENT	0.00		
International Development Association (IDA)	80.00		
Global Environment Facility (GEF)	6.00		
Total	86.00		
Expected Disbursements (in USD Million)			

Fiscal Year	2014	2015	2016	2017	2018	2019	2020	0000	0000
Annual	2.00	5.00	25.00	28.00	18.00	5.00	3.00	0.00	0.00
Cumulative	2.00	7.00	32.00	60.00	78.00	83.00	86.00	0.00	0.00

Project Development Objective(s)

The Project Development Objective is to develop inclusive commercial agriculture and sustainable land management in project areas

Global Environmental Objective(s)

N/A

Components

Component Name	Cost (USD Millions)
Component 1: Support to sector actors	11.00
Component 2: Development of irrigation infrastructure and sustainable natural resources management	68.50
Component 3: Project Coordination, Management, Communication, Monitoring and Evaluation (GEF: US\$0.5 million; IDA: US\$6 million)	6.50

Institutional Data

Sector Board

Agriculture and Rural Development

Sectors / Climate Change

Sector (Maximum 5 and total % must equal 100)

Major Sector	Sector	%	Adaptation Co-benefits %	Mitigation Co-benefits %
Agriculture, fishing, and forestry	Irrigation and drainage	50		
Agriculture, fishing, and forestry	General agriculture, fishing and forestry sector	25		
Industry and trade	Agro-industry, marketing, and trade	25		
Total		100		

I certify that there is no Adaptation and Mitigation Climate Change Co-benefits information applicable to this project.

Themes		
Theme (Maximum 5 and total % must equal 100)		
Major theme	Theme	%
Financial and private sector development	Infrastructure services for private sector development	25
Trade and integration	Export development and competitiveness	20
Trade and integration	Trade facilitation and market access	25
Rural development	Rural services and infrastructure	30
Total		100
Compliance		
Policy		
Does the project depart from the CAS in content or in other significant respects?	Yes []	No [X]
Does the project require any waivers of Bank policies?	Yes []	No [X]
Have these been approved by Bank management?	Yes []	No []
Is approval for any policy waiver sought from the Board?	Yes []	No [X]
Does the project meet the Regional criteria for readiness for implementation?	Yes [X]	No []
Safeguard Policies Triggered by the Project	Yes	No
Environmental Assessment OP/BP 4.01	X	
Natural Habitats OP/BP 4.04	X	
Forests OP/BP 4.36	X	
Pest Management OP 4.09	X	
Physical Cultural Resources OP/BP 4.11	X	
Indigenous Peoples OP/BP 4.10		X
Involuntary Resettlement OP/BP 4.12	X	
Safety of Dams OP/BP 4.37	X	
Projects on International Waterways OP/BP 7.50	X	
Projects in Disputed Areas OP/BP 7.60		X

Legal Covenants			
Name	Recurrent	Due Date	Frequency
Agreements between the Project Coordination Unit and each implementing agency		17-Jul-2014	
Description of Covenant			
The Recipient shall, by not later than four (4) months after the Effective Date, enter into agreements with SAED, APIX, and National Agency for the Great Green Wall.			
Name	Recurrent	Due Date	Frequency
Project Implementation Manual		17-Jun-2014	
Description of Covenant			
The Recipient shall, not later than three (3) months after the Effective Date, prepare, in accordance with terms of reference acceptable to the Association, and furnish to the Association, a proposed implementation manual for the Project containing detailed (i) administrative, (ii) procurement, (iii) financial and accounting; and (iv) monitoring and evaluation procedures and arrangements, including land degradation, sustainable forest management and carbon tracking tools, for the Project.			
Name	Recurrent	Due Date	Frequency
External Audit		17-Jul-2014	
Description of Covenant			
The Recipient shall recruit, not later than four (4) months after the Effective Date the external auditor.			
Name	Recurrent	Due Date	Frequency
Internal Audit		17-Jul-2014	
Description of Covenant			
The Recipient shall recruit, not later than four (4) months after the Effective Date, an internal auditor, whose qualifications and experience and terms of reference shall be acceptable to the Association.			
Name	Recurrent	Due Date	Frequency
The project coordination unit is fully staffed		17-Jul-2014	
Description of Covenant			
The recipient shall, by not later than four (4) months after the Effective Date, recruit and thereafter maintain at all times two procurement specialists, an accountant, a monitoring and evaluation specialist, a sustainable land management and water management specialist, an environmental safeguard specialist, a social safeguard and community development specialist, and a communication specialist.			
Name	Recurrent	Due Date	Frequency
Project Steering Committee		17-Jun-2014	
Description of Covenant			
The Recipient shall, not later than three months (3) after the Effective Date, establish, and thereafter maintain throughout the period of Project implementation, with terms of reference, mandate, composition and resources satisfactory to the Association, a steering committee chaired by the Minister in charge of agriculture and comprised of representatives of all key ministries, agencies, rural communities, civil society and related private institutions involved in the Project.			

Name	Recurrent	Due Date	Frequency
Agreement with OMVS for dams safety inspection		17-Jun-2014	
Description of Covenant			
The Recipient shall, by no later than three (3) months after the Effective Date, enter into an agreement with the OMVS to ensure that the OMVS shall carry out safety inspection of said Dams at intervals of not less than once every five years during the implementation of the Project, by independent experts, including a civil structure and dam safety specialist whose terms of reference, qualifications, and experience shall be satisfactory to the Association.			
Name	Recurrent	Due Date	Frequency
Dams risks of inundation and potential uncontrolled release of water		17-Jun-2014	
Description of Covenant			
The Recipient shall, not later than three (3) months after the Effective Date, in accordance with terms of reference satisfactory to the Association, carry out a study of risks of inundation and related potential uncontrolled release of water from the Diama and Manantali Dams.			
Name	Recurrent	Due Date	Frequency
Dams operation and maintenance plan and emergency preparedness plan		17-Jun-2014	
Description of Covenant			
The Recipient shall, not later than three (3) months after the Effective Date, in accordance with terms of reference satisfactory to the Association prepare an operation and maintenance plan and emergency preparedness plan for the Diama and Manantali Dams, based on the results of said study; and furnish said study and plans to the Association for its review; and adopt and implement said plans taking into account the views of the Association on the matter.			
Name	Recurrent	Due Date	Frequency
Implementation support consultant		17-Jun-2014	
Description of Covenant			
The Recipient shall, by not later than three (3) months after the Effective Date, employ, in accordance with the provisions of Section III of Schedule 2 to the Financing Agreement, an implementation support consultant whose qualifications, experience and terms of reference shall be acceptable to the Association.			
Conditions			
Name			Type
Key Project Coordination Unit staff are recruited			Effectiveness
Description of Condition			
The Recipient has recruited a Project coordinator and a financial management specialist in accordance with the provision of Section I.A.2(a) of Schedule 2 to this Agreement			
Name			Type
Land Framework adopted by the Government			Effectiveness

Description of Condition			
The Land Framework has been adopted in accordance with Section I.G of Schedule 2 to this Agreement			
Name			Type
Accounting software			Effectiveness
Description of Condition			
The Recipient has acquired and installed the accounting software referred to in Section II.B.5 of Schedule 2 to this Agreement			
Name			Type
Co-financing Agreement			Effectiveness
Description of Condition			
The Co-financing Agreement has been executed and delivered and all conditions precedent to its effectiveness or to the right of the Recipient to make withdrawals thereunder (other than the effectiveness of this Agreement) have been fulfilled			
Team Composition			
Bank Staff			
Name	Title	Specialization	Unit
Wolfgang M. T. Chadab	Senior Finance Officer	Senior Finance Officer	CTRLA
Jorge A. Munoz	Adviser	Adviser	AES
Arnaud D. Dornel	Lead Financial Sector Specialist	Lead Financial Sector Specialist	AFTFW
Mademba Ndiaye	Senior Communications Officer	Senior Communications Officer	AFRSC
Nevena Ilieva	Senior Operations Officer	Senior Operations Officer	AFTSN
Juvenal Nzambimana	Senior Operations Officer	Operations Officer	AFTA1
Korotoumou Ouattara	Sr Financial Economist	Sr Financial Economist	SASFP
Jonathan Mills Lindsay	Lead Counsel	Lead Counsel	LEGEN
Johanna van Tilburg	Senior Social Development Specialist	Senior Counsel	AFTOS
Anta Tall Diallo	Program Assistant	Program Assistant	AFCF1
Jean-Philippe Tre	Senior Agriculture Economist	Team Lead	AFTA1
Andre Teyssier	Sr Land Administration Specialist	Sr Land Administration Specialist	AFTA2
Maman-Sani Issa	Senior Environmental Specialist	Senior Environmental Specialist	AFTN2
Grazia Atanasio	Consultant	Consultant	ECROC
Vincent Palmade	Lead Economist	Lead Economist	SASFP
Jacqueline Lockward	Program Assistant	Program Assistant	AFTFW

Maya Abi Karam	Senior Counsel	Counsel	LEGAM
Pierrick Fraval	Sr Water Resources Spec.	Sr Water Resources Spec.	AFTA2
Sidy Diop	Senior Procurement Specialist	Senior Procurement Specialist	AFTPW
Adesimi Freeman	Head	Head	AFTFW
Khady Fall Lo	Program Assistant	Program Assistant	AFCF1
Fadwa Bennani	Private Sector Development Specialist	Private Sector Development Spec.	MNSF1
Berengere P. C. Prince	Sr Natural Resources Mgmt. Spec.	Sr Natural Resources Mgmt. Spec.	AFTN3
Ngor Sene	Financial Management Specialist	Financial Management Specialist	AFTMW
Johanne Buba	Jr Professional Officer	Jr Professional Officer	AFTFP

Non Bank Staff

Name	Title	Office Phone	City
Peter Cohen	Social Safeguards Specialist		
Gabriele Rechbauer	Environmental Specialist	33-624241938	France
Robert Robelus	Consultant		Washington

Locations

Country	First Administrative Division	Location	Planned	Actual	Comments
Senegal	Saint-Louis	Saint-Louis			
Senegal	Louga	Louga			

I. STRATEGIC CONTEXT

A. Country Context

1. **Senegal experienced a succession of domestic and external shocks in the past decade, many of which were exogenous.** Real annual GDP growth averaged only 3.4 percent for the period 2006-10, down from an average of 4.4 percent for the period 2000-05. In the decade since 1995, Senegal had enjoyed robust per capita GDP growth, but starting in 2006, Senegal's largely open economy was buffeted by a series of domestic and external shocks. Unfavorable rains prompted a sharp decline in agriculture output during 2006-07. The international food and oil price shocks from 2007-08 slowed the economy, negatively affected the price level, and resulted in a significant deterioration of Senegal's external and fiscal positions. The weaknesses in fiscal policy and public financial management were compounded by the fiscal costs of highly ineffective and untargeted subsidies for electricity and food. As a result, by the end of 2008, the government had accumulated domestic arrears to the private sector equivalent to more than 3 percent of GDP, forcing a strong corrective response that tightened fiscal policy. The onset of the global financial crisis in 2008 and its deepening in 2009, together with new domestic shocks, including floods in the Dakar region and continued electricity shortages, further contributed to the general slowdown of the country's economic activity.

2. In 2011, real GDP growth slowed to 2.6 percent, due to continued energy shortages and a large contraction in agricultural output. Agricultural output (rice, millet, groundnut, maize, sorghum, cotton, cassava and cowpea) declined drastically in the fourth quarter when more than 50 percent of the annual production is harvested, leading to a fall in annual output of 21 percent. The rains were insufficient and erratic, but there were also problems in input supply. In contrast, non-agricultural activities continued their momentum and grew by 5 percent. Electricity supply improved in the last semester, thanks to the implementation of the emergency plan, which helped a recovery in manufacturing. Dynamism in the telecommunication, transport, and financial sectors contributed to the good performance of the tertiary sector. On the demand side, public spending, private consumption, and exports were the main drivers of economic growth in 2011.

3. In 2012, a high level of public investment in infrastructure combined with a rebound in agriculture production and continued strong performance in the mining sector were expected to help Senegal resume its historical growth trajectory. However, macroeconomic performance in 2012 remained weak. Real GDP growth for 2012 reached 3.5 percent, which is substantially lower than the 4.4 percent initially projected. This slowdown compared to the projections reflects the tense pre-electoral environment, the 2011 drought, the continuing economic downturn in Europe, and a slowdown in emerging markets, as well as the crisis in Mali, a country that accounts for a large share of Senegal's exports. The General Activity Index—a proxy of non-agricultural GDP—increased by only 1.5 percent on a year-on-year basis, down from 3.8 percent in the first quarter of 2011. Growth is projected to accelerate to 5.0 percent by 2015 as the effects of the downturn in the global economy dissipate and the authorities deepen structural reforms.

4. **A sharp acceleration of structural reforms would be needed to ensure faster and sustainable growth at a level consistent with the authorities' ambitious targets of above 7**

percent a year. The higher growth rate targeted by the authorities under the Accelerated Growth Strategy (AGS) could be reached if the Government accelerates implementation of market-oriented structural reforms and efficiently executes infrastructure projects, including energy and road infrastructure, on which the success of the strategy depends. Further improvements in the investment climate are also needed to attract private sector investments. Senegal ranked as the 5th best reformer in the World Bank's *Doing Business 2008* report thanks to its good performance in the Trading Across Borders, Starting a Business, and Registering Property categories. The country jumped 19 positions in 2008 compared to 2007. However, the momentum for reforms slowed down in recent years with Senegal ranking 154th out of 183 countries in the World Bank's *Doing Business 2012* report. Going forward, investment climate reforms should also include reforms of key industries such as energy and agriculture.

5. To better face increasing climate variability, Senegal should accelerate its efforts to move away from rain-fed agriculture by expanding irrigated agriculture, which currently represents 5 percent of the cropped area¹. The general downward trend in rainfall observed since the 1950s and the increased frequency of droughts² combined with population growth has negatively affected agro-pastoral production systems and the livelihood of local communities.³ Between 1976 and 2002, Senegal experienced a total of six years of major droughts⁴. While climate science uncertainty makes it difficult to accurately predict the effects of climate change, there is an emerging consensus that future droughts in Senegal will become longer and more intense, particularly in the Northern part of the country.⁵

6. **Despite the economic recovery, poverty remains widespread, especially in rural areas.** According to the 2011 household survey, the incidence of poverty in the country is at 46.7 percent of the population: more than 6 million Senegalese people live in households with income below the national poverty line. Two-thirds of the poor live in rural areas. The overall poverty rate decreased by 7.9 percent between 2003 and 2007. The Government has retained its objective of achieving a poverty rate of 35 percent by 2015. However, in spite of these improvements, Senegal still ranks 155 out of 187 countries in the United Nations Development Programme (UNDP) Human Development Index (HDI) 2011. Inequality appears to have risen, with the ratio of consumption in the top quintile relative to the bottom quintile doubling from 5 to 10 between 2006 and 2011. Also, geographical disparities remain broadly unchanged.

7. **The rural households heavily depend on natural resources** primarily for food production⁶ as well as wood energy, gathering and hunting.⁷ A quick glance at the wealth

¹ CGIAR 2012, Agricultural GHGs in East and West Africa, Baseline emissions and mitigation potential, Working Paper #3.

² CSE, 2011, *Outils de gestion durable des terres au Sénégal : Contribution de LADA. Rapport.*

³ The main Senegalese crops are highly exposed to drought and/or flooding and their yearly production varies greatly with the weather.

⁴ The droughts caused a considerable decline in crop yields with losses of about US\$40 to 159 million for peanuts (0.9 percent to 3.8 percent of the GDP over the same period) and US\$27 to 69 million of revenue for the millet/sorghum (0.6 percent to 1.6 percent of the GDP) Data from the National Strategy for Social Protection and Risk Management (2006-2010).

⁵ IPCC, 2012, Special Report on Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation.

⁶ The agricultural sector is primarily comprised of smallholder farmers practicing rain-fed cultivation.

composition for Senegal shows that soil related natural capital is an important engine of long-term growth that is worth US\$1,272 per capita⁸ compared to a per capita income of US\$1,080.⁹ This illustrates that natural wealth constitutes a potentially large pool of resources that can be sustainably channeled to support economic growth.

8. Key parts of Senegal's natural capital, including soils and forests, are under considerable threat of degradation. Land degradation has been estimated to affect approximately 2.5 million hectares, about 34 percent of the land area¹⁰ which accounts for 4.5 percent of the GDP¹¹ according to 2002 government estimates. In addition, the country's forest cover continues to deteriorate at a rate of 0.5 percent per annum. Land and forest degradation is occurring as a result of natural factors such as drought, water, wind, salt intrusion, bush fires and, more profoundly, because of anthropogenic factors such as land clearing for agricultural expansion and overexploitation of forest products, essentially for wood energy and grazing¹².

9. Although annual public expenditures to combat land degradation reached approximately US\$643 million between 1997 and 2007,¹³ these efforts have had limited success. Direct and indirect drivers of land degradation have been more powerful than efforts to preserve land as a result of lack of alternatives and limited awareness of sustainable techniques¹⁴. The review of the second Poverty Reduction Strategy Paper¹⁵ (PRSP) further shows that unsustainable exploitation of forest products has exceeded forest regeneration in recent years. Together with the acknowledged loss of protected forests due to infrastructure development and agricultural expansion, forests are increasingly under threat.

10. In response, Sustainable Land and Water Management (SLWM) and Sustainable Forest Management (SFM) practices should be scaled up, based on the known success stories and lessons learned in Senegal and in other countries. Isolated successes in Senegal have been identified where community-based efforts have restored hectares of degraded lands. Restoring degraded land is estimated to cost on average US\$1,100 per hectare whereas preventing land degradation requires minimal investments of approximately US\$200 per hectare.¹⁶ It is thus important to promote the adoption of an approach whereby communities take the lead in

⁷ Republic of Senegal, 2010, Global Analysis of Vulnerability, Food Security and Nutrition.

⁸ A breakdown of the different types of natural capital – including cropland and pasture land, timber and non-timber forest resources, and protected areas – shows the importance of soil for Senegal. Agricultural land accounts for 63 percent of natural wealth. Forest assets, including timber and non-timber resources, account for 30 percent of natural capital. The remaining 6 percent is related to protected areas. These estimates from *Where is the Wealth of Nations* (World Bank, 2006) do not include fish stocks.

⁹ World Bank. 2012, *Senegal at a glance*.

¹⁰ CSE, 2011, *Outils de gestion durable des terres au Sénégal : Contribution de LADA. Rapport*.

¹¹ Republic of Senegal, 2002, *Fiches Techniques pour l'Elaboration du Plan d'Orientation pour le Développement Economique et Social 2002 – 2007*.

¹² INP, 2012, National Strategic Investment Framework for Sustainable Land Management.

¹³ INP, 2012, National Strategic Investment Framework for Sustainable Land Management.

¹⁴ Direct man-made drivers are deforestation, overgrazing, inappropriate crop and soil management, overexploitation of vegetation cover and overharvesting of forest products, fires in forests and grasslands. Indirect drivers are poverty, population pressure, education and awareness, lack of knowledge and land tenure system.

¹⁵ Government of Senegal, Ministry of Economy and Finance, 2010, Formulation of the Economic and Social Policy Document for 2011-2015, PRSP-II Progress Report.

¹⁶ Luc Gnacadja, Executive Secretary UNCCD, 2011, Interview.

ensuring the needed quality of their land and water resources. Such an approach has to be multisectoral, to address the main drivers of land degradation with sustainable agricultural/pastoral practices and sustainable forest products harvesting, and has to target women, who comprise the majority in rural areas and who play a predominant role in food production.

B. Sectoral and Institutional Context

11. **The proposed project is at the heart of the government's development strategy.** The government is committed to developing a competitive, inclusive and sustainable agribusiness industry as a priority, singling out in particular the horticulture and rice value chains in the Saint Louis/Senegal River region. Agribusiness, horticulture in particular, is also highlighted in the Strategy for Accelerated Growth (*Stratégie de Croissance Accélérée – SCA*) which aims to diversify agricultural exports and increase trade revenues. The main goals of the SCA are to promote domestic and foreign direct investment and significantly boost the competitiveness of the Senegalese economy domestically and in regional and international markets. The strategy focuses on continued improvement in the business climate, and the development of clusters of services and skills to raise the productivity and industrial fabric of enterprises (particularly SMEs) and of the labor force in five key economic sectors that have the potential for high value added, employment creation, and boosting exports. They include agriculture, agro-industries, and the fisheries sector (processing industries and fish farming).

12. Since 2000, the Government of Senegal has directed a number of actions towards the development of commercial agriculture. These include making structural investments with donor support such as building specialized infrastructure (post-harvest, storage and logistics), providing support to the formal organization of several value chains (tomato, horticulture, rice, cassava and maize), improving the judicial framework with the adoption of the investment code and several programs such as: (i) *Loi d'Orientation Agro-Sylvo-Pastorale (LOASP)*; (ii) *Grande Offensive Agricole pour la Nourriture et l'Abondance (GOANA)*; and (iii) *Programme National d'Investissement Agricole (PNIA)*. Programs like GOANA have put more emphasis on developing commercial agriculture for food security purposes. Others, such as the IDA-financed Agricultural Markets and Agribusiness Development Program (PDMAS), have focused on the expansion of agribusiness across the country through substantial investments in improved domestic market conditions, support to non-traditional agricultural exports, and demand-driven irrigation infrastructure.

13. **The agriculture sector context is marked by increasing private sector interest.** Senegal has a number of attributes that make it an attractive location for investment in agriculture and agri-business. It is economically and politically stable. The investment climate is generally positive. It has good logistics for serving domestic, regional and international food markets that are likely to expand with continued urbanization, and there is substantial scope for import substitution. However, productivity remains low, suggesting the potential for large returns if yields can be increased. Moreover, while food prices have fallen from their recent peaks, they are nevertheless expected to remain above historical levels into the medium term.

14. While investment agriculture and agri-business can provide large benefits, it carries considerable risks both to investors and citizens in the locality of the investment. Poor planning

can easily lead to conflict between investors and groups who have land user rights. In addition, the lack of a regulatory framework or enforcement capacity can exacerbate land and water degradation trends. Over time, inappropriate farming techniques can severely degrade the quality of topsoil and threaten water quality. **A solid regulatory framework can ensure that investments provide broad long-term benefits and contribute to larger development outcomes.** Such a framework would include a set of agreed social and environmental standards and benefit-sharing mechanisms.

15. **Agribusiness, horticulture in particular, has strong untapped potential in Senegal.** Through the preparation of its SCA the Government of Senegal has identified 15 growth poles in the agribusiness sector for key promising value chains with high potential for growth. Six poles are along the Senegal River (including the main areas of focus for this project), two in the Niayes, two in the natural region of Casamance, two in the Groundnut Basin and three in Eastern Senegal. The growth poles were identified based on their climate and adaptation to the production of tropical or tempered climate agricultural products, availability of water, access to land, communication channels and other logistical support. The potential is particularly strong for horticulture (7 out of the 15 poles) with exports having increased from 2,700 tons in 1991 to 31,000 tons in 2010.

16. Exports are primarily directed to Europe, in particular for counter-seasonal winter products from December to April. High value products with strong export potential include asparagus, watermelon, sweet corn, sweet potato, okra, green pepper, zucchini, eggplant, red pepper, basil, papaya, and strawberry. The products in high demand either for import substitution or in sub-regional markets are onions, tomatoes, potato, carrots, and hibiscus. With improved warehousing and varieties, Senegal domestic production could compete with imports – e.g. Senegal imports 70,000 tons of potatoes and 90,000 tons of onions. Senegal has a comparative advantage in the production of several horticulture products for both the European and domestic/regional markets due to: (i) generally favorable climatic and water conditions; (ii) availability of land; (iii) lower labor cost; (iv) capacity to supply to European markets at a time when others cannot; (v) proximity to European markets with the availability of competitive air and rapid sea transport; (vi) privatization of inputs markets which allows access to quality inputs; (vii) emergence of competitive players along the horticulture value chains; and (viii) a regulatory environment conducive to private sector investment with little policy distortion (unlike other agricultural sectors such as groundnuts and sugar). Incentives for the Free Export Enterprises status (*Entreprise Franche d'Exportation*) are still in place and continue to attract private investors and provide a viable environment for agricultural exports.

17. **The Ngalam Valley and Lac de Guiers areas have great agribusiness potential, particularly for horticulture.** Horticulture production (65 percent vegetables and 35 percent fruits) comes from two main production zones: i) the Niayes and ii) the St Louis region (the Delta¹⁷, the Middle Valley, East and West of Lac de Guiers). Other horticulture zones are found in Thiès, Kaolack, Casamance, and Tambacounda. The Ngalam Valley and Lac de Guiers areas are well-positioned both in terms of unused land (the Niayes and Thies regions are becoming saturated) and accessibility (much easier than Casamance). The area around St Louis has the

¹⁷ The Ngalam Valley is located in the Delta of the Senegal River.

potential to develop more than 70,000 hectares (ha) of prime irrigated land, which can be devoted to horticulture production (less than 30,000 ha currently). The St Louis region also has great potential in other sectors such as livestock and fish products, which could share some of the same competitiveness platforms in terms of physical and institutional infrastructure.

18. **Within the St Louis and Louga regions, the Ngalam Valley and Lac de Guiers have several attractive features and advantages.** The two sites already face a strong demand from the private sector as agro-ecological conditions are highly suitable for horticulture (cooler climate due to marine breeze in the Ngalam Valley, sandy soils in both zones, easy access to water around the Lac de Guiers) in addition to the availability of water for irrigation throughout the year. The sites offer a sizable stock of land with 15,000 ha available in the Ngalam Valley and more than 40,000 ha around Lac de Guiers. The region is endowed with a fair road linkage with Dakar and the roads around the Lac de Guiers are being rehabilitated (with the support of the EU and MCA). The region also enjoys good access to the European markets following the reforms at the Dakar port and the availability of fast boat connections. Senegal can out-compete other countries relying on air freight (e.g. Peru and Kenya) and has similar transit time and cost as Morocco with respect to accessing Northern European markets. Finally, a modern agro processing facility, the Agropole, exists in the region. The facility was constructed in 2007 near Mpal. It is equipped with classification chains for fruits and vegetables, storage and cold-chain chambers, packaging facilities, as well as a slaughterhouse. It has a large potential for local production processing and conditioning.

19. During field visits, discussions with existing investors in the region have indicated a strong interest in working with the project and expanding their current operations. In addition, several interests have been expressed from private companies through the Private Investment Promotion Agency (*Agence de Promotion des Investissements et des Grands Travaux - APIX*), which has been involved in promoting private investment in agribusiness in Senegal over the last decade. The International Finance Corporation (IFC) is also experiencing increased demand for agribusiness investments in the region.

20. Despite this potential, several constraints continue to impede agribusiness development and limit private sector investment in the region. These constraints have been identified in studies conducted by development partners and validated by the authorities¹⁸ as described in the SCA. The binding constraints in the horticulture value chains vary by zones and type of players. **The binding constraint for all type of investors in the Ngalam Valley is the lack of access to water together with land degradation (salinization).** The binding constraint for medium and large investors on the right bank of Lac de Guiers is lack of secured access to land and undue political interference with respect to land allocation. As for the left bank of Lac de Guiers, another binding constraint has been the lack of primary road infrastructure. This constraint is in the process of being lifted as a result of private investments in the rural community of Ngnith, which has experimented with West African Farms, an established agribusiness company, to develop an inclusive model for allocating land user rights to private (see Annex 6). SMEs and smallholders are also constrained by their limited scale, skills and access to finance. Table 1

¹⁸ USAID and the African Development Bank.

below summarizes the main constraints by zones and types of players that the project will help address.

Table 1: Main constraints by project area and by type of horticulture player

	Ngalam Valley	Lac de Guiers
Large investors	Binding: Lack of access to water and land degradation (salinization) ¹⁹ Problematic access to land Insufficient linkages between large and small producers	Binding: Land conflicts on the right bank Lack of road infrastructure on the left bank (being addressed) Insufficient linkages between large and small producers
SMEs and smallholders	Binding: Lack of access to water and land degradation (salinization) Limited scale, skills and access to finance	Limited scale, skills and access to finance

21. In the Ngalam Valley and Lac de Guiers areas, there are 40,000 ha of classified forests and natural reserves, which sustain local population through rearing, wood collection, hunting and fodders. In recent years, tree density has substantially decreased as a result of reduced precipitations, overgrazing and bush fire. These areas suffer from severe land degradation, in particular from wind erosion and salinization.²⁰

22. **Processing is an underexploited value chain segment.** The country imports many processed products that could be competitively produced domestically, and exports raw materials that – if processed – could be sold at much higher margins. Processing could also help reduce post-harvest losses, which affect farmers’ incomes. It is estimated that only 5 percent of the fruits and vegetables grown in Senegal are processed. The main underexploited value chain segments include product enhancement, conservation, packaging, storage, transportation, distribution and branding.

23. The proposed blended IDA/GEF Senegal Sustainable and Inclusive Agribusiness Development Project (SSIAP) fits squarely within the country and sector context as it aims to remove the specific constraints standing in the way of capturing, in a sustainable way, the agribusiness opportunities in the Ngalam Valley and Lac de Guiers areas discussed above. The project will assist the construction of physical infrastructure and institutions through a flexible, community-driven approach that will nurture an attractive environment for private sector involvement. The project will consolidate and expand the achievements of the PDMAS which has performed successfully in export promotion of high value commodities and has helped establish key resource exports infrastructures (e.g. Feltiplex) and FOS (Fondation Origine Senegal) to promote the Senegal label and quality. The project will also build on the Sustainable

¹⁹ Areas of irrigated production systems are the most affected land use areas at national level (73 percent)

²⁰ More than 20 percent of forestry areas are affected by land degradation.

Land Management Project, which has successfully piloted a community-led approach for land restoration and conservation. It is also expected that the project will establish best practices on facilitating private sector investments in agriculture that are inclusive, sustainable and respect informed choices and existing rights of local communities and populations.

24. The project will work closely with existing public institutions and agencies involved in the sector. They include: (i) the Organization for the Development of the Senegal River Valley (*Organisation pour la Mise en Valeur du Fleuve Sénégal – OMVS*), the regional body responsible for overall management of the Senegal River water resources; (ii) the Agency for the Development of the Senegal River Delta (*Société d'Aménagement et d'Exploitations des terres du Delta et des Vallées du fleuve Sénégal et de la Falémé – SAED*), responsible for the development and management of irrigation infrastructure in the Senegal river area, including the Ngalam Valley; (iii) The Office of Lac de Guiers (*Office du Lac de Guiers - OLAG*), agency in charge of the management of water resources from the Lac de Guiers; (iv) the Directorate for Analysis and Prediction of Agricultural Statistics (DAPSA) and the Directorate of Horticulture of the Ministry of Agriculture

25. Other relevant agencies involved in the sector include: (i) the Private Investment Promotion Agency (*Agence de Promotion des Investissements et des Grands Travaux - APIX*), which has been involved in promoting private investment in agribusiness in Senegal over the last decade; (ii) the Permanent Secretariat of SCA (SPSCA); (iii) the Horticulture Inter-Professional Cooperation (*Cooperation Federative des Acteurs de l'Horticulture du Senegal - CFAHS*); (iv) research and training institutes such as the Horticultural Development Centre of the Senegalese Institute for Agricultural Research (ISRA), Gaston Berger University, and the Horticultural Centre of Vocational Training (CFPH); and (v) the National Agency for the Great Green Wall of the Ministry of Environment.

C. Higher Level Objectives to which the Project Contributes

26. The project is consistent with the Senegal Country Partnership Strategy (CPS) (FY13-FY17). The SSIAP is one of the key projects geared toward achieving the objective of the CPS under pillar one to accelerate inclusive growth. The successful implementation of this project will put economic growth in Senegal on a more sustainable footing by unlocking its agriculture-based economic growth potential and will preserve Senegal's soil-related natural resources for future use in the Ngalam Valley and Lac de Guiers areas. Land is identified as an important form of natural capital for Senegal whereas specific activities have also been included under the foundational pillar of the CPS on strengthening the governance framework and building resilience. The target set in the CPS is 7,000ha of additional area with SLWM practice in targeted areas of intervention by 2017.

27. There is ample evidence to suggest that horticulture and non-traditional crops can serve as a sound engine of shared growth and poverty reduction for Senegal, provided appropriate action is taken to face the agriculture sector's main challenges. These challenges are related to access to capital, promotion of sustainable irrigation technologies, and development of market facilities. By adequately addressing these challenges, the project will build a framework for sustainable agriculture competitiveness in the country. In addition, agribusiness is one of five focal sectors in the country's SCA and its development has been shown to be an effective

response to rural unemployment and economic growth. Thus, it will contribute to the borrower's objective of poverty reduction and economic growth among the rural poor through increased incomes and employment in rural activities. Moreover, the project will contribute to achievement of the Millennium Development Goals of eradicating extreme poverty and hunger.

28. The proposed project would contribute to both pillars of the Bank's Africa Region Strategy – competitiveness and employment, and vulnerability and resilience, as well as to the foundation of the strategy - governance and public sector capacity. Reforms aimed at reducing barriers to economic growth through an improved investment climate and improved infrastructure will contribute to both objectives of the strategy by supporting the attainment of higher growth and the diversification of the economy. Diversification of the economy is expected to reduce the economy's vulnerability and enhance its resilience to external shocks by broadening the economic base and reducing the dependence on drought-prone agriculture. The measures aimed at strengthening capacity of the Government to promote the private sector will directly support improved economic governance. The project also supports an emerging priority in support of Africa's dry lands sustainable development, whereby solutions to unlock the dry lands' growth potential and to better manage shocks and vulnerability to climate change are brought together.

29. The **Global Environmental Facility (GEF)** strategies for land degradation, climate change mitigation and sustainable forest management were used to inform the design of the project, which draws on three GEF focal areas: (i) land degradation (US\$3.2 million); (ii) climate change mitigation (US\$1.4 million); and (iii) sustainable forest management (US\$1.4 million). The project responds to the recommendations articulated in Senegal's second communication to the UNFCCC (2010), the technology needs assessment for the UNFCCC (2012), the National Action Plan pour Climate Change Adaptation (PANAC, 2006) and the UNCDD national action program (NAP, 2000).

30. The World Bank/GEF **Sahel and West Africa Program (SAWAP)** in support of the Great Green Wall that was approved by the GEF Council in May 2011 offers a regional investment framework for this proposed project. The SAWAP addresses major issues related to land degradation, including food security, climate change mitigation and adaptation, to support sustainable development in Burkina Faso, Chad, Ethiopia, Mali, Mauritania, Niger, Nigeria, Senegal, Sudan, Benin, Togo, and Ghana. The project is expected to benefit and provide feedback into a SAWAP-related new initiative, *BRICKS (Building Resilience through Innovation, Communication, and Knowledge Services Project)*, mainly for monitoring, GIS modeling, and knowledge management.

II. PROJECT DEVELOPMENT OBJECTIVES

A. Project Development Objective (PDO)

31. The Project Development Objective (PDO) is to develop inclusive commercial agriculture and sustainable land management in project areas.

32. This will be done through investments in infrastructure (irrigation in particular), technical assistance to key public institutions (rural communities in particular), and support to the private

sector (including smallholders) all along the agribusiness value chains. More details on Results Framework and Monitoring are provided in Annex 1.

33. The project will develop and implement inclusive and sustainable solutions, particularly with respect to community-driven land and water and forest management systems, which will be scalable and replicable in other regions of Senegal.

34. The definition of SLWM adopted in this project is based on TerrAfrica's²¹ definition: the adoption of land use systems that, through appropriate management practices, enables land users to maximize the economic and social benefits from land while maintaining or enhancing the ecological support functions of the land resources. SLWM includes the sustainable management of soil, water, vegetation and animal resources. It involves a holistic approach that integrates social, economic, physical and biological assets.

B. Project Beneficiaries

35. **Direct beneficiaries** are estimated at more than 10,000 people and more than 100 off-farm enterprises in the Ngalam Valley and Lac de Guiers areas. They will comprise: (i) smallholders to be engaged in commercial sustainable agriculture; (ii) medium-scale farmers who will expand their current production; (iii) wage workers who will work in all types of activities across the value chain; and (iv) SMEs and large operators benefiting from primary irrigation infrastructure. It is noteworthy that more than 65 percent of the direct beneficiaries will be women, who represent the bulk of wage workers.

36. The project will directly support various Government and private sector agencies playing a key role in the sector (SAED, Office du Lac de Guiers, rural communities, APIX), the DAPSA and the Directorate of Horticulture of the Ministry of Agriculture, the Cooperation Federative des Acteurs de l'Horticulture du Sénégal (CFAHS), research institutes (Horticultural Development Centre, ISRA), Gaston Berger University, the Horticultural Centre of Vocational Training (CFPH) the Ministry of Environment, and the National Agency for the Great Green Wall. In addition to the direct capacity building for these specific agencies, improvements in transparency and efficiency of the agencies supported by the project are expected to increase public confidence in the public institutions.

37. **Indirect beneficiaries** include members of smallholders' households, value chain stakeholders, and wage workers engaged in new activities.

C. PDO Level Results Indicators

38. PDO-related performance indicators: (i) total value of commercial agriculture in the targeted areas; (ii) number of jobs created in targeted areas, including a breakdown by gender

²¹ TerrAfrica is a partnership that aims to address land degradation in Sub-Saharan Africa by scaling up harmonized support for effective and efficient country-driven sustainable land management. It is a model for donor harmonization, Africa-driven development, multi-disciplinary work and mutual accountability. TerrAfrica receives direction and support from a group of African governments; NEPAD; the UNCCD Secretariat; the World Bank; the UNCCD's Global Mechanism; FAO; UNDP; UNEP; IFAD; AfDB; multilateral organizations; bilateral donors; and civil society organizations. (www.terrAfrica.org).

and hired by large investors; (iii) land areas where sustainable land management practices have been adopted as a result of the project; (iv) number of direct project beneficiaries, of which female, also broken down by SMEs, smallholders, medium farmers and wage workers; and (v) forest area brought under management plans.

III. PROJECT DESCRIPTION

39. The project will provide technical assistance to key stakeholders (rural communities in particular) and the private sector (in particular, smallholders engaged in commercial agriculture) as well as investments in critical irrigation infrastructure. This will enable the sustainable and inclusive exploitation of 10,000 ha of irrigated land in the Ngalam Valley and around the Lac de Guiers (St Louis and Louga regions), divided in multiple lots. The project will leverage and complement the Bank-financed PDMAS and the ongoing MCA-funded project, which are developing 2,500 ha in the Middle Valley and 3,000 ha in the Ngalam Valley. The final choice of the specific locations will be determined based on land made available by rural communities, investor demands, and eligibility criteria. The Project design anticipates that rural communities themselves will make land allocation decisions in a participatory way and will be the beneficiaries of direct agreements with investors. Because of current legal provisions that preclude direct allocation of land from Rural Communities to investors, the project will test a “Lease-Sub-lease Option” land allocation model. Under this model, the Government will convert land identified and selected by the Rural Community from the *Domaine national* to the *Domain privé de l’État*. It will then lease this land (*bail emphytéotique*) to the Rural Community, which in turn will sub-lease the land to the investor (see Annex 6 for more details).

40. The project will help put in place the conditions necessary to attract responsible private investors in the community-led development of agri-business in a way that promotes inclusive participation of smallholders and SMEs through local sourcing, contract farming or any other relevant scheme. The aim is to maximize the leverage of strategic private investors with respect to their access to high value markets, technology, skills and financing capacity. It is expected that the project will leverage more than US\$100 million of private investment from large operators. It will also help reduce land degradation and will increase carbon sequestration²² and protect the environment.

41. The project’s approach is based on a transparent and participatory land and water allocation process led by informed and equipped rural communities. It will promote investment agreements that ensure that affected communities have the opportunity and responsibility (i) to decide whether or not to make land available for investments, based on informed choices; (ii) to secure sustained and well-defined benefits; (iii) to receive fair compensation for the land (including common areas) and natural resources that they make available for investment; (iv) to engage in ongoing partnerships with investors and Government; and (v) to be able to hold investors accountable for their commitments. The approach will be articulated prior to project

²² According to FAO (World Soil Resources Report 102, 2004), irrigation is recommended to increase the amount of carbon in soil in drylands. In small-scale irrigation systems, a high potential for carbon sequestration arises from supply of water that allows high primary productivity from slow decay of soil carbon as well as from extensive use of manure.

effectiveness in a “Land Framework” embodying the principles and procedures set forth in Annex 6 to this PAD, including, *inter alia*: (a) procedures and sequencing for the participatory, transparent, informed and voluntary community-based identification of land for potential agribusiness investment; and (b) criteria and procedures for land consolidation, allocation, establishment of land use rights, leasing of land to Rural Communities and subleasing to private investors. The Land Framework will be guided by the Principles for Responsible Agricultural Investment (RAI) as well as the United Nations Voluntary Guidelines on Governance of Land Tenure (UNVGGLT). These principles and guidelines will be complemented by SLWM principles and will become applicable for large investors as well as medium and smallholder farmers to reduce land degradation and GHG emissions.

42. The project’s design allows for flexibility in the number and size of the sites, whereby each site will be adapted to the level of community participation and the scheme’s attractiveness to the private sector. Part of the 10,000 irrigated ha established by the project will benefit smallholders and SMEs with the remaining portion being developed by larger investors. The actual ratio of land used and investment plans will be agreed upon by the rural community as a pre-requisite for investment.

A. Project Components

43. The proposed lending instrument is a six-year Investment Project Financing (IPF) in the amount of US\$80 million blended with a US\$6 million GEF grant. The project will finance the following activities:

Component 1: Support to sector actors (GEF: US\$2.5 million; IDA: US\$8.5 million)

44. This component will support up to nine rural communities²³ in Northern Senegal (Saint Louis and Louga regions) through technical assistance to ensure that land user rights are allocated to private operators in an inclusive and sustainable way, benefiting the broader community. It also provides vocational training and applied research to farmer associations, SMEs and agriculture business associations. Technical assistance will be provided to support local communities in negotiating SLWM-friendly agribusiness contracts and to promote adoption of SLWM practices by farmers, including demonstration areas. Finally, it will support the rehabilitation of the Agropole and the land management process.

Subcomponent 1.1: Improved Rural Communities and Small-Scale Farmers’ Capacity (GEF: US\$2.5 million; IDA: US\$4.5 million)

45. Technical assistance will be provided to help rural communities allocate land user rights (and provide sub-leases) to private operators following an inclusive, transparent and competitive

²³ Four rural communities in Department Dagana in Saint Louis Region: Ngnith, Diama, Ronkh., Mbane. Three rural communities in Department Saint Louis in Saint Louis Region: Fass Ngom, Ndiebene Gandiole, Gandon and two rural communities in Department of Louga in Louga Region: Keur Momar Sarr and Syer.

process²⁴. Rural communities will be responsible for selecting interested private investors. The selection will be made during village committee meetings convened by village leaders.

46. A technical assistance program will be established to: (i) assist local communities to undertake land rights inventories and planning to identify up to 10,000 ha of land they choose to make available to private commercial agriculture producers, including small-scale producers (about 5,000 hectares in the Ngalam Valley and 5,000 ha around Lac de Guiers); (ii) carry out feasibility studies and elaborate master plans for the development of irrigated perimeters in the selected areas; (iii) assist rural communities in selecting private operators through a transparent and competitive process at village level, and in negotiating commercial agriculture contracts with said private investors which shall include sustained benefits, fair compensation and enforceable rights for the community; (iv) assist rural communities in monitoring investors' activities to ensure fulfillment of their obligations as per the legally binding contracts that will be negotiated by the communities with private investors; and (v) develop effective dispute resolution mechanisms. The different steps in the land allocation and negotiations process, as well as the role of the technical assistance firm, are detailed in Annex 6 and in Annex 10, and will be further elaborated and confirmed in the Land Framework.

47. The project will specifically assist communities in the identification of parcels that they consider suitable for private investment. Project activities will include a visit to each of the concerned villages to ensure that consultations at the village level have been undertaken. The consulting team will conduct an analysis of the land tenure background, and will assess the compatibility of each land offer with existing or on-going land allocations and the Land Use and Allocation Plans (POAS). As land allocation for private investment may increase the pressure on common resources, the project will check that each targeted project area is in compliance with the POAS.

48. The project will also support feasibility studies with multi-criteria evaluation and activities to support land management capabilities of rural communities. This will include: (i) a multi-criteria evaluation of the land offers in economic (distance to water, roads, energy sources) and agriculture terms (soil potential, cultivation prospects), including models of irrigation systems in each parcel; (ii) a comprehensive land use rights inventory and a GPS survey of parcel boundaries; (iii) an indicative set of technical recommendations to guide future development and a land allocation scheme between large investors, medium and small producers in each parcel; and (iv) a baseline measurement in order to have initial data and measure the expected effects on additional incomes for farmers, agricultural production (in quantity and value) and on new cultivated areas.

49. The project will help the rural community monitor the investments agreement effectiveness and to facilitate obtaining various approvals and ensure online publication of land allocation decisions by rural communities as a means to improve transparency and

²⁴ The selection of the agribusinesses would be made on the basis of a number of variables, including long-term sustainability of the project, impact of the project on the Senegalese economy, impact on local population (in terms of jobs creation, access to irrigated land, possibility of contract farming with the SME, financial contribution to the local development budget), control of environmental impacts, and financial contribution to the creation of the irrigated sections, and be contingent on successful completion of negotiations with the Rural Communities.

accountability. Legal assistance services will be provided by consulting services to the rural community to enable contract finalization and enforcement.

50. This activity will also provide technical advisory services to small-scale farmers for the establishment of producers' associations and business partnerships with large investors as well as the adoption of sustainable land and water management practices such as windbreaks, cover crops, no-till or minimum tillage crops, and water-efficient irrigation techniques.

51. A consultant team will be recruited under the PPA for the implementation of these activities. During project preparation, preliminary studies were conducted to: (i) assess the land availability in the targeted rural communities; (ii) design land identification methods for allocation to potential investments; and (iii) assess communities' needs in terms of technical assistance.

Subcomponent 1.2: Improved Selected Key Stakeholders' Capacity (IDA: US\$3 million)

52. The project will support to APIX in promoting private investment in agribusiness under the project (IDA: US\$1 million). It will consist in carrying out a program of activities to assist APIX in: (i) identifying and attracting investment in commercial agriculture and agribusiness; (ii) preparing marketing documents for parcels of land identified in accordance with the Land Framework; and (iii) preparing a model framework partnership agreement ("*cahiers des charges*"), through the provision of technical advisory services and acquisition of goods required for the purpose.

53. The project will provide technical advisory services to the Gaston Berger University of St Louis (IDA: US\$0.5 million) for the development of SLWM inclusive vocational training and applied research in selected agribusiness value chains for small-scale farmers and SMEs. The project will support a program of activities to enhance the horticulture sector (IDA: US\$1 million) through the development and implementation of a marketing and certification framework as well as the provision of detailed feasibility studies of business opportunities along existing and future value chains. Modalities for organic and/or fair trade certification will be assessed and piloted. Equipment, materials and supplies required for this purpose will also be provided.

54. This activity will also support the rehabilitation of the Agropole (IDA: US\$0.5 million), a modern agro-processing facility constructed in 2007 near Mpal. Although it is equipped with classification chains for fruits and vegetables, storage and cold-chain chambers, packaging facilities, as well as a slaughterhouse, the Agropole has been poorly utilized and is in need of rehabilitation. A public-private partnership assessment is being conducted jointly with IFC in order to identify feasible options for private sector involvement, with a mandate to provide quality services to SMEs and smallholders.

Subcomponent 1.3: Support to the land management process (IDA: US\$1 million)

55. Through the provision of technical advisory services, the project will support a review of the policy, legal and institutional frameworks governing the use and allocation of rural land as it relates to agribusiness investment. This would include: (i) reviewing relevant laws and practices

in light of the findings of the Land Governance Assessment Framework, international best practice guidelines including the Voluntary Guidelines on the Governance of Land Tenure and the Project's Land Framework; (ii) assessing capacity strengths and weaknesses at all levels of government and within Rural Communities; (iii) compiling and distilling lessons learned within Senegal and elsewhere from actual ongoing, proposed or failed investments; (iv) identifying reforms that may be needed in laws, institutions and practices to address identified constraints and weaknesses; and (v) developing specific instruments -- such as model leases, platforms for the transparent public display of information concerning investments, local level land administration and mapping tools, etc.

56. This component will provide technical assistance to the National Commission for Land Reform, as well as relevant public institutions and civil society organizations, including the General Directorate of Taxes and Domains (DGID).

57. Within participating Rural Communities, the project will also support the updated mapping of agricultural land, the preparation of a cadastral plan showing the allocation of land rights to investors and community members, and the design and implementation of a mechanism by which information concerning investments are made public.

Component 2: Development of irrigation infrastructure and sustainable natural resources management (GEF: US\$3 million; IDA: US\$65.5 million)

58. This component will finance public irrigation infrastructure in the Ngalam Valley and around Lac de Guiers. This will include the design, construction and equipment of critical primary irrigation infrastructure and secondary canals. It will provide matching grants to small-scale farmers and SMEs for the establishment of tertiary irrigation systems as well as inputs packages for smallholders.

59. Implementation of secondary and tertiary works will start only after the land users' rights allocation process under component 1.1 is completed. Further, the component will support community-driven forest management as contributor to sustainable and inclusive land management. The following activities will be financed:

Subcomponent 2.1: Irrigation infrastructure and water resources management in the project areas (IDA: US\$61.5 million)

60. This sub-component will finance the primary bulk water infrastructure including secondary canals and tertiary irrigation infrastructure for the sustainable development of 10,000 ha of irrigated land in the Ngalam valley (5,000 ha) and around Lac de Guiers (5,000 ha). It will also provide associated technical assistance to enable the improved sustainable management of water resources in the area. The following activities will be financed:

- (a) The design, construction and equipment of a primary irrigation canal in the Ngalam Valley (US\$23 million) to enable the development of more than 5,000 ha of prime irrigated land. These investments will allow sufficient water supply to the Ngalam River course and Gandiolais Canal. This infrastructure will include intakes at the Senegal River, water conveyance and diversion, pumping, storage and main supply as well as the rehabilitation of the natural water flow from Lac de Guiers to the Ngalam

through the Ndiael. During project preparation, a pre-feasibility study was conducted to identify and assess various options. The exact locations of the infrastructure investments will be determined during project implementation and based on the feasibility studies completed within the first 12 months of the project.

- (b) The design, construction and equipment of secondary irrigation canals for 10,000 ha of irrigated perimeters (US\$19.5 million) in the Ngalam Valley at the Lac de Guiers area.
- (c) The design, construction and equipment of tertiary irrigation schemes for local small-scale farmers in the project perimeters (US\$16 million) of the Ngalam Valley and the Lac de Guiers area. Smallholders will also be provided with technology packages, including improved seeds.
- (d) Rehabilitation and construction of access roads to and within the project areas, as well as secondary works such as fences, storage facilities, and the extension and expansion of electricity connections (US\$2 million). The actual locations of these investments will be determined based on actual needs of rural communities and investor demand.
- (e) Technical assistance (US\$1 million) to the SAED and Office du Lac de Guiers (OLAG) responsible for sustainable management of water resources in the Senegal River Delta and Lac de Guiers. This technical assistance will include support to the design and implementation of an integrated water management plan in collaboration with OMVS, the regional body responsible for overall management of the Senegal River water resources. It will also include the financing of a detailed environmental audit for the whole region, the Lac de Guiers and the Ngalam being both part of the same sub-catchment.

61. SAED will be in charge of the technical implementation of activities (a) to (d). This will include the preparation of tender documents for consultants' services for the design of primary, secondary and tertiary irrigation structures and bidding documents for the procurement of all related works and goods. Physical investments will be implemented after appropriate capacity building of rural communities. The sequencing of project activities is described in paragraphs 97-100.

Subcomponent 2.2: Matching Grants (IDA: US\$4 million)

62. Financing will be available for SMEs and farmers associations (US\$4 million) through matching grants of up to 80 percent of the costs of sub-projects to improve their productive capacity and competitiveness and to develop linkages with larger firms operating in the project. A capped amount of financing (US\$200,000 per perimeter) will be provided for tertiary irrigation infrastructure, business development services and training in areas such as development of business plans, financial statements, marketing and product design. The project will have eligibility criteria based on experience, detailed feasibility studies and agreement on environmentally sound practice. It will strongly encourage and support contract farming arrangements between the large investors and smallholder groupings with inclusion of SLWM practices wherever possible.

***Subcomponent 2.3: Sustainable Management of classified forests and natural reserves
(GEF: US\$3 million)***

63. This activity will support the implementation of an inclusive landscape management approach²⁵ supportive of sustainable land uses on agricultural and non-agricultural land. Local community members use available but decreasing natural resources in nearby classified forests and woodlands for firewood, fodder and construction. They need to be part of the planning and management process and efforts to ensure more sustainable forest management and increased carbon sequestration as these forests provide key ecosystem services needed for all riparian land uses. The project is expected to attract more people to the area, which will likely result in increased pressure on surrounding natural resources.

64. The sub-component will finance technical assistance to the National Agency for the Great Green Wall, Regional Inspection of Water and Forests as well as the Regional Division of Environment and Classified Establishments. The objective is to provide for more sustainable management and protection of nine selected classified forests and natural reserves within the selected rural communities of the project. Activities to be financed will include: (i) a participatory diagnosis; (ii) the preparation of management plans by communities for selected classified forests and natural reserves in order to identify priority activities for conservation and sustainable forest management; (iii) communication campaigns (radio, brochures); (iv) selective natural regeneration (identification and protection of the most interesting plants, preferably native species, for natural regeneration, drought, wind and soil erosion resilience) preferably managed by women's groups; (v) building and maintaining networks of firebreak trails; (vi) provision of small management equipment; and (vii) supporting the establishment of a community surveillance committee. These activities will be jointly implemented by user groups and the local water and forest administration. The diagnostic will include mapping and delineation of the forest and reserve, recommendations for the sustainable regeneration of forest cover, and review of other existing management plans such as the POAS. Natural regeneration will be systematically favored over reforestation.

65. Criteria for the participatory diagnosis and forest management plans supportive of increased carbon sequestration will be included in the Project Implementation Manual.

Component 3: Project Coordination, Management, Communication, Monitoring and Evaluation (GEF: US\$0.5 million; IDA: US\$6 million)

Subcomponent 3.1: Coordination and project management (IDA: US\$3.5 million)

66. Under this subcomponent, the project will finance: (i) PCU staff, equipment and operating costs; (ii) technical assistance through consultancies on specific issues (technical, legal etc.), and audits; and (iii) capacity building for project staff, including focal points within the technical implementing agencies and technical partners, through training and study tours.

²⁵ The landscape is the unit that integrates all livelihoods that depend on farm, forest, range, wetlands, or water habitats.

Subcomponent 3.2: Impact Monitoring and Evaluation (GEF: US\$0.5 million; IDA: US\$1.5 million)

67. The activities consist of coordination of monitoring and evaluation (M&E) related activities that will be performed by the technical implementing agencies and specific tasks that cut across the project components. These include: mapping of out-growers and service providers in project areas; monitoring subprojects financed under a matching grants mechanisms; contracts with technical implementing agencies; supervision of implementation of the safeguards instruments and land framework; updating project key performance indicators; monitoring GEF tracking tools at mid-term and completion; elaborating and editing periodic reports; and carrying out impact evaluations (economic, social, environmental).

68. This sub-component will finance equipment (computers and servers, personal digital assistants-PDAs, etc.), goods (software, digitized maps), and consultant services for technical assistance, training, and operating costs. Technical assistance will be provided to technical implementing agencies for improved monitoring arrangements.

Subcomponent 3.3: Communication (IDA: US\$1 million)

69. This sub-component will finance consultants and non-consultant services for the preparation and implementation of communication campaigns and stakeholders consultations. It will also finance the production of public media and documentation on lessons learned from the implementation process. A communications strategy will be prepared and implemented in order to foster effective implementation of the project components and specifically to: (i) ensure transparency in land allocation procedures (Subcomponent 1.1); (ii) promote a policy dialogue on land issues (Subcomponent 1.3); and (iii) support the development and implementation of forest conservation and management plan (Subcomponent 2.3).

70. To ensure stakeholder engagement at the local levels and support the successful implementation of the project, a fully-fledged communications and outreach strategy towards rural communities and broad project stakeholders will be developed in order to: i) inform stakeholders about project objectives, modalities, and benefits; and ii) disseminate best practices and lessons learned for the purposes of replicating the sustainable and inclusive approach of the project.

71. The communications program will employ the span of available formal and informal channels and will be managed by a communication specialist within the Project Coordination Unit that will drive the communication process.

B. Project Financing

Lending Instrument

72. The proposed lending instrument is a six-year Investment Project Financing (IPF) in the amount US\$80 million blended with a US\$6 million GEF grant.

Project Cost and Financing

Project Components	GEF Grant US\$ million	IDA US\$ million	Total amount US\$ million
1. Support to sector’s actors	2.5	8.5	11.0
2. Development of irrigation infrastructure and natural resources management	3.0	65.5	68.5
3. Project coordination, monitoring and evaluation (includes project preparation advance)	0.5	6.0	6.5
Total Financing	<u>6.0</u>	<u>80.0</u>	<u>86.0</u>

Contingencies included in each component

C. Lessons Learned and Reflected in the Project Design

73. A number of innovative commercial agriculture interventions have recently been approved by IDA with similar objectives and modalities as the current project²⁶ and others are under preparation²⁷. Similarly, several sustainable land and water management projects have been prepared and approved since 2006 under the TerrAfrica umbrella and through GEF-approved programs such as the Strategic Investment Framework and the Sahel and West Africa Program in support of the Great Green Wall. ‘Communities of practice’ have been established within the Africa region to share lessons across task teams on both commercial agriculture and sustainable land management. Recent Bank-sponsored ‘flagship’ studies highlight the importance of infrastructure provision in leveraging private investment²⁸ and in improving value chains and other key policy and investment needs to improve the regions competitiveness.

74. The project’s design leverages a number of key specific studies – in particular: (i) in-depth analysis of the opportunities and constraints in the horticulture sector (with a particular focus on the Ngalam Valley and Lac de Guiers areas) developed as part of the Accelerated Growth Strategies; (ii) the master plan to develop irrigation around the Lac de Guiers; (iii) the studies of the Ngalam Valley developed as part of the “Irrigation and Water Resource Management Project” funded by the MCA; (iv) studies on the revitalization of the Ndiel funded by the Dutch Technical Cooperation Agency; (v) land legal study; (vi) case studies of horticulture development in Peru, Morocco and Kenya; (vii) demand assessment of international investors; and (viii) Sustainable Land Management in Practice.

75. The following key lessons are directly relevant to the design of this project and informed the borrower and the World Bank team throughout preparation and appraisal:

76. The project is private sector-driven to ensure relevance of planned investments and reduce costs. While proposing an additional public investment, this project is designed to leverage private sector investments and to create a context for public-private partnerships. To the

²⁶ For example Burkina Faso, Ghana, Niger, Zambia.

²⁷ For example Tanzania and Mozambique.

²⁸ Agribusiness in Africa - Regional Flagship Report on Africa's Competitiveness.

extent possible, the project supports a framework where private sector partners would invest in targeted areas using their own equity or privately-sourced loans. This additional contribution would enable the project to develop a larger area – and impact on a larger number of beneficiaries – than would be possible solely with funds available from Government and IDA. In addition, the involvement of strategic foreign investors with business know-how is an effective means of providing hands-on demonstration of the skills necessary to shift institutional business paradigms. This form of “international technical assistance” will provide the expertise and the critical factors to successfully develop the professionalism of local operators.

77. **Selectivity to increase focus and critical mass.** There are clear lessons on reform emerging from several developing countries concerning the prioritization of investment climate improvements. The SCA highlighted the “binding constraints” to growth in Senegal across a number of sectors, value chains and locations. It looked at systematically identifying key growth drivers, income-enhancing diversification, critical constraints, and the cost-benefit factors that could help to determine the best sequencing of reform actions. The project is focused on a limited area (the Ngalam Valley and Lac de Guiers) and one sector (agribusiness) with high potential and well-identified surmountable constraints. Other Bank-supported operations, such as the recently approved Casamance Regional Development Pole Project, are helping the Government with additional sub-sectors, value chains and locations.

78. Reliance on a few institutions with strong track records and incentives to implement the project will help to ensure effectiveness, sustainability and replicability. As discussed in the next section, the project will rely on a small project coordination unit based in the St Louis Region that will rely on strong implementation partners, in particular, the SAED, which has successfully managed irrigation schemes along the Senegal River for the last thirty years.

79. **The imperative of inclusive commercial agriculture.** Previous experience in agriculture and rural development programs highlighted the importance of affording due consideration to distributional impacts of policies and programs, especially where larger-scale commercial ventures are perceived to disadvantage smallholder farmers. Contract farming and the like would be an essential part of the solution. As part of project preparation, the Bank assessed conditions under which such ventures – as a sub-set of those to be assisted by the project – would be consistent with wider Senegalese social norms and, in particular, would be acceptable to local communities. Village consultations confirmed that local communities endorsed the project approach.

80. **Anticipating and managing failure.** Private investment is risky and agriculture-based investment more so. Venture capital companies manage failure by demanding exceedingly high returns from the small number of successes they achieve, but such returns are rarely available and consequently, investment is limited. Success of the public sector in ‘picking winners’ is notoriously mixed, to say the least, and even specialist private sector investors often encounter unforeseen difficulties. Despite best endeavors and professional management, unforeseen risks will remain and the project will anticipate failure in several ways. First, it will minimize the risk of failure through greater discipline in sub-project selection. Second, agreements with private investors who are not fulfilling their investments obligations will be terminated. Land allocated to such failed investments will be reallocated to other potential investors. This is critical to avoid the situation where land upon which projects have operated – land that by definition has been

subject to feasibility studies and has received community acceptance – is abandoned. In that sense, the project will assist rural communities in establishing a sound and legal procedure for terminating agreements and cancelling land leases to investors who fail to fulfill their investments obligations.

81. **Sustainability of irrigation infrastructures.** The project approach will mainly draw from the same approach to the maintenance funds for hydraulic infrastructure and drainage systems as used in the Senegal River Valley (FoMAED). Project beneficiaries are currently contributing an annual fee to cover operations and maintenance (O&M) costs of rehabilitated perimeters. The level of the contribution is directly related to the type of irrigation systems and services provided. It is determined and specified in a contract between perimeters users and SAED, the identified executing agency. The project will also build from other experiences such as projects funded by the Spanish Technical Cooperation Agency which have established sustainable mechanisms with water user group participation in planning and management of irrigation schemes. Under the Senegal Millennium Challenge Account, a national action plan is currently being finalized for the establishment of national operation and maintenance funds for public irrigation infrastructure. These initiatives will reinforce the O&M cost recovery structures to be adopted in rehabilitated irrigation schemes.

82. Following the successful SAED-supported model in the valley, it is suggested that the land reserved for SMEs in a perimeter should be subdivided into autonomous irrigated units (AIUs) of about 25 ha. The project will promote as far as possible the grouping of farmers into Economic Interest Groups (EIG), thus enabling them to benefit from economies of scale. Each EIG will have one AIU. These AIUs/EIGs will be grouped into a Hydraulic Union, which will be responsible for the management of sub-perimeters of 200 ha dedicated to small- and medium-sized producers. The Hydraulic Union will collect fees to cover the operating costs of the hydraulic system, following the effective SAED-supported model already implemented in the irrigated areas in the valley.

83. **Addressing the risk of “land grabs”.** The spike in global food prices in 2008 led to a rapid expansion of investment – often from overseas – in large-scale commercial agriculture ventures. It is widely acknowledged that increased private sector investment in agriculture, if done correctly, represents a very important opportunity for unlocking the economic potential of rural Africa. There is also compelling evidence, however, that poorly managed and regulated investment could result in “land grabs” that undermine local land rights, disrupt livelihoods, weaken food security, and diminish the long-term prospects for investment by exacerbating tensions between investors and host communities. The project has been designed taking into account lessons learned from analysis of this phenomenon both globally and in Senegal, including the ongoing Land Governance Assessment Framework (LGAF) process, work by other development partners such as the Millennium Challenge Corporation, and key insights from analytical work done by the Bank and others (see Deininger et. al, *Rising Global Interest in Farmland: Can it Yield Sustainable and Equitable Results?* (World Bank, 2010)). This project will assist Senegal to focus efforts to involve the ‘right’ investors in the ‘right’ projects – i.e., reputable investors with technical know-how and financial depth willing to invest in the kind of productive enterprises that yield a private return and contribute to Senegal’s development goals while protecting the rights of the rural communities. The project has also been designed with reference, *inter alia*, to emerging international consensus on these issues as represented by the

interim Principles for Responsible Agricultural Investment (see box below) as well as the United Nations Voluntary Guidelines on Governance of Land Tenure (see Annex 6).

Box 1: The Principles for Responsible Agricultural Investment (RAI)

The Principles of Responsible Agro-Investments are a set of guidelines developed by the World Bank and other international organizations to guide client Governments in managing large-scale investments in land. They have also been applied to guide lending by development partners. These are:

Principle 1: Existing rights to land and associated natural resources are recognized and respected;

Principle 2: Investments do not jeopardize food security but rather strengthen it;

Principle 3: Processes for accessing land and other resources and then making associated investments are transparent, monitored, and ensure accountability by all stakeholders, within a proper business, legal, and regulatory environment;

Principle 4: All those materially affected are consulted, and agreements from consultations are recorded and enforced;

Principle 5: Investors ensure that projects respect the rule of law, reflect industry best practice, are viable economically, and result in durable shared value;

Principle 6: Investments generate desirable social and distributional impacts and do not increase vulnerability; and

Principle 7: Environmental impacts due to a project are quantified and measures taken to encourage sustainable resource use while minimizing the risk/magnitude of negative impacts and mitigating them.

84. **Need to shift the focus to land productivity and environmental sustainability in the agricultural sector.** Previous interventions focused mainly on commodity production and intensification rather than on sustainable management of land resources and productivity. The impact and long-term sustainability of these interventions were therefore limited. SLWM needs to be well integrated in the agriculture sector. The fully blended IDA/GEF project integrates environmental issues into the agricultural interventions at all levels.

85. **Managing environmental sustainability.** The project takes the seventh Principle for Responsible Agricultural Investment one step further by anticipating direct and indirect environmental externalities. The project fully integrates SLWM best practices with the view to reverse local and global trends in the loss of trees and vegetative cover. Training and technical assistance will be provided to rural communities, smallholders and SME for adoption of SLWM practices. The project design also anticipates possible indirect impacts of project activities. With the expansion of agricultural areas, livestock routes will require adjustment. Herders will be involved in upstream discussions and the preparation of the management plans of surrounding forests and sylvo-pastoral reserves. The project is expected to attract more population in the project area, which will likely result in increased pressure on surrounding natural resources. These pressures will be managed through participatory management plans and strengthened capacity for decentralized services provided by the Ministry of Environment.

IV. IMPLEMENTATION

A. Institutional and Implementation Arrangements

86. The project's management structure will be articulated around three bodies: the Project Steering Committee (PSC); the Project Coordination Unit (PCU); and technical implementing

agencies. The project coordination, management, implementation, monitoring and evaluation procedures will be detailed in the Project Implementation Manual (PIM), which will clarify each authority's roles and responsibilities.

87. Strategic oversight of the project will be provided by the PSC. This Committee will be chaired by the Minister of Agriculture and Rural Equipment or his representative and include Ministers or representatives of the Ministry of Economy and Finance, Ministry of Infrastructure; Ministry of Investment Promotion and Partnerships; Ministry of Environment and Sustainable Development; Ministry of Hydraulics and Sanitation; Ministry of Justice, Ministry of Territorial Planning and Local Collectivities, rural communities of the Ngalam Valley and Lac de Guiers areas in St Louis and Louga Regions, SAED, OLAG, OMVS, APIX, Secretariat of SCA, representatives of civil society and private institutions. The PSC will meet on a quarterly basis and will be responsible for approving the annual work plans and budgets and providing policy direction.

88. The Project will be managed on a day-to-day basis by a PCU. The need for strong multi-sector coordination coupled with identified substantial risks associated with the project requires an empowered, dedicated, decentralized, multi-sectoral team of experts that is currently not provided in the current configuration of the public sector in Senegal. The PCU will coordinate and consolidate the annual work plans and budgets and oversee the financial management and procurement of all other technical implementing agencies. It will be located in St Louis.

89. The PCU will be an independent entity anchored in the Directorate of Horticulture of the Ministry of Agriculture and Rural Equipment. The PCU staff will be competitively recruited and dedicated to project activities. It will be responsible for all fiduciary aspects of the project including procurement, disbursement, accounting, financial reporting and monitoring, and evaluation of the project, and for ensuring the auditing of project account. The PCU will be composed of the following staff: (i) a coordinator; (ii) two procurement specialists; (iii) a financial management specialist; (iv) an accountant; (v) a monitoring and evaluation specialist; (vi) a communication specialist; (vii) a SLWM and environmental safeguard specialist; and (viii) a social safeguard and community development specialist. Additional staff with specific expertise may also be recruited. The PCU will act as the Secretariat of the Project Steering Committee (including preparing the meetings, elaborating the documents for the meeting, recording the minutes of the meeting, etc.).

90. The PCU will prepare quarterly and annual reports recording the progress of the project. Project implementation support by the World Bank will be carried out twice a year and a mid-term review will take place in 2017 with the objective of assessing progress to date and if necessary to re-direct the project by integrating additional lessons learned and realities on the ground. All project accounts will be audited annually by independent auditors acceptable to IDA and should be submitted to IDA no later than six months after the closing of the fiscal year in Senegal.

91. Key PCU staff, including the Project Coordinator and the financial management specialist, will be recruited before project effectiveness.

Implementation of project components

92. Management and implementation of individual project components/project subcomponents will be mainstreamed to selected technical implementing agencies involved in the project through designated focal points who will work closely with the PCU. The PCU will retain all fiduciary responsibilities.

93. Technical implementing agencies will be responsible for the execution of specific project activities as defined in the work plans. Funding for the operational costs associated with this function will be provided under the project. In light of capacity constraints, these agencies will also be beneficiaries of capacity building efforts by the project. Agreements between the PCU and each implementing agency will be prepared within four months of project effectiveness. The technical implementing agencies under the project are:

- SAED, which will be the implementing agency for the primary, secondary and tertiary irrigation infrastructure, rural roads, parcel electrification and capacity building of small producers (Sub-components 1.1 and 2.1);
- APIX, which will be the implementing agency for activities related to investment promotion and investor aftercare with the support of the project. They will carry out international tenders based on the feasibility studies and masters plans developed under Sub-component 1.1; and
- The National Agency for the Great Green Wall of the Ministry of Environment, which will implement Component 2.3.

94. The PCU will be responsible for the implementation of the whole project.

95. **Focal Points.** To ensure coordination between the PCU and technical implementing agencies, each will designate a focal point. The appointment of such focal points will be done within four months of project effectiveness as part of the agreement signed between the PCU and the technical implementing agencies. The role and responsibility of the focal point will be clearly detailed in the PIM and the respective terms of reference. The project will strengthen the capacity of the focal points through technical assistance and equipment.

96. **Sequencing of project implementation.** Project activities will be phased over time. The implementation of the technical assistance to sector actors will start at the beginning of the project. It is essential that rural communities are provided with appropriate capacity building for land management and land allocation decisions before physical investments start.

97. Between the date of effectiveness and 18 months after effectiveness, the following activities will be undertaken: (i) capacity building of rural communities will be implemented for suitable identification of land availability and transparent land allocation process. The recruitment of consultancy services that will provide technical assistance to rural communities is currently underway and will be completed before project effectiveness; (ii) launch of the land allocation process, including the identification of private sector entities interested in leasing land as well stakeholder consultations on the land allocation process; (iii) finalization of the technical design of the critical infrastructure shortly after specific project locations are known based on land availability and investors demand, and launch of the bidding process for works; feasibility studies will include environmental and social impact assessments for the irrigation infrastructure

investments; (iv) further assessment of land tenure and issues, including the number of current land users in project sites, people affected, the cost of investment, negotiations, and compensations; (v) the preparation of sustainable management plans for classified forests and natural reserves; and (vi) provision of technical advisory services to local small-scale farmers.

98. From 18 months to 24 months after effectiveness and once the land allocation process is completed, the following physical investments will be launched: (i) primary irrigation canal works in the Ngalam Valley; (ii) construction of secondary irrigation canals around Lac de Guiers; and (iii) rehabilitation and construction of secondary infrastructure such as access roads, fences and storage facilities.

99. From 24 to 36 months after effectiveness, the following activities will be launched: (i) construction of secondary canals in the Ngalam Valley; (ii) works for tertiary irrigation systems for local small-scale farmers in the lac de Guiers area. Finally, further works will be launched for tertiary irrigation systems for small-scale farmers in the Ngalam Valley. The table below shows the expected timing and phasing of main project activities.

Table 2: Phasing of main project activities

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
TA to rural communities	X	X	X	X	X	X
TA to private sector	X	X	X	X	X	X
Primary water infrastructure		Ngalam	Ngalam			
Secondary water infrastructure		Lac de Guiers	Lac de Guiers/ Ngalam	Lac de Guiers/ Ngalam	Ngalam	
Tertiary water infrastructure			Lac de Guiers	Lac de Guiers/ Ngalam	Lac de Guiers/ Ngalam	Ngalam
Irrigated land (ha)	0	500	1500	3000	3000	2000

100. **Technical assistance to rural communities.** In order to ensure that the technical assistance provided to the communities is genuinely independent and free of conflict of interest, there will be contractual arrangements between the communities and the consulting firms once recruited by the project coordination unit. The contractual arrangements between the consulting firms and the project will reflect payments conditional of services provision that are found satisfactory to and by the communities.

101. **A Project Implementation Manual (PIM)**, including a Project Implementation Plan, will be finalized within three months of project effectiveness. The PIM will include sequencing of all activities, periodic reporting, monitoring and evaluation arrangements throughout the life of the project. The PIM will further include SLWM, SFM and carbon benefit measurement guidelines and criteria.

102. The PIM will also include a grievance handling and dispute resolution mechanism to help with the applications of contractual clauses between the rural communities and the investors. The contractual agreement between the rural communities and the investors will include such mechanisms of dispute resolution to be agreed among the communities, local authorities and investors. A model lease contract between the State and the communities as well as a model sub-

lease contract between communities and the operators will be developed with project support, through a consultative process with relevant stakeholders.

103. A Land Framework reflecting the land allocation process and procedures described in Annex 6 will be prepared and adopted by the Government as a condition of project effectiveness. It will be included in the PIM.

B. Results Monitoring and Evaluation

104. Particular attention will be paid to building sustainable monitoring capacity beyond the life of the project including capacity for measuring carbon stored in forest ecosystems and emissions avoided from deforestation and forest degradation. The monitoring will thus rely on existing structures that the project will help building further capacity. In addition, monitoring efforts will require active participation from rural communities who were not previously involved in such efforts. This is expected to increase awareness and sustainability as monitoring implies increasing knowledge.

105. The output-level M&E will be the responsibility of the PCU. The PCU will hire a Monitoring and Evaluation Specialist responsible for this work for all components. This will ensure effective and timely monitoring of progress towards achieving the intermediate results of the Monitoring Framework as set out in Annex 1. Output-level M&E indicators and implementation will be closely reviewed by the Project Steering Committee, by the World Bank and by the Ministry of Agriculture and Ministry of Environment to ensure that the required targets are achieved.

106. Making impact evaluation an integral part of the Senegal Agribusiness Development Project reflects the desire expressed by stakeholders to systematically investigate the effectiveness of the project. Such analysis will not only allow for a comprehensive stocktaking and review of the project's achievements but will also help to identify the underlying mechanisms and constraints affecting its mode of functioning. The survey instruments will be gender-informed to shed light on any differential project effects on men and women.

107. Data for M&E and for the Impact Evaluation will be collected by various existing structures (SAED, Service du Port Autonome de Dakar, Agence Nationale de la Grande Muraille Verte, Ministry of Environment and Sustainable Development, DAPSA and Directorate of Horticulture at the Ministry of Agriculture and Equipment). In addition, the PCU will carry out targeted surveys of enterprises and households (before the project implementation, mid-term and at completion) that will be used both for monitoring and impact evaluation.

108. A baseline survey will be carried out prior to respondents' exposure to any relevant intervention activities in order to confirm initial data and measure the expected effects on farmers, agricultural production (in quantity and value), and on newly-cultivated areas.

109. Environmental outcomes will be monitored through a set of specific indicators. The GEF tracking tools for land degradation, climate change mitigation and sustainable forest management have been submitted and will be monitored at project mid-term and at completion. The PCU is expected to conclude a tailor-made arrangement with the BRICKS initiative defining BRICKS monitoring and knowledge exchange support as part of the broader SAWAP initiative. Carbon

sequestration monitoring remains a challenging undertaking. A methodology and a more detailed approach for a qualitative assessment of carbon sequestration, GHG emission reduction and GHG emission efficiency due to the nature of the interventions will be developed in the PIM.

C. Sustainability

110. Sustainability is considered at two levels in this project. The first level refers to the sustainability of the private sector businesses that are brought about through the instruments supported by the project. Sustainability of the business will be promoted through direct project assistance for business managers (including at the scale of small producer associations). Moreover, careful screening of potential partners to benefit from project support, particularly through technical assistance– will seek to weed out weak propositions. Even where individual investments fail, the project will improve the way in which failed projects can close and assets – in particular land under existing lease with the defunct operator – can be reallocated by rural communities to a new investor in accordance with the terms of the contract.

111. Second, the investments being realized under the project must be socially sustainable as well as environmentally sustainable. For the latter, the fact that investments must be subject to national regulations, World Bank and global environmental standards, and guidelines under the focal areas and safeguards policies, respectively, provides for a higher standard of environmental consideration than has thus far occurred. A major contribution will be the adoption of sustainable land, water and forest management practices by the private sector, rural communities and local stakeholders in the project intervention area. With regard to social and political sustainability, these issues are at the core of the project.

V. KEY RISKS AND MITIGATION MEASURES

A. Risk Ratings Summary Table

112. The risks to the project are High. Preliminary risks and mitigation measures that have been identified are presented in the attached “Operational Risk Assessment Framework” (ORAF) worksheet in Annex 4.

Risk	Rating
Stakeholder Risk	High
Implementing Agency Risks	
- Capacity	Substantial
- Governance	High
Project Risk	
- Design	Substantial
- Social and Environmental	Substantial
- Program and Donor	Low
- Delivery Monitoring and Sustainability	High
Overall Implementation Risk	High

B. Overall Risk Rating Explanation

113. Regarding land related risks, land for agriculture will not be acquired through compulsory acquisition under the project. The project will target land which is currently under the control of rural communities, and which those communities themselves will identify as available for the project. Nevertheless, depending on the location, land governance and tenure conditions on land can pose risks to the project because: (i) they may impede the ability of investors to gain access to secure land rights; and (ii) they may increase the vulnerability of existing land users to displacement. Uncertainty may be exacerbated by disputes within and between communities as to ownership and a lack of clarity as to boundaries. A wide range of subsidiary rights (i.e., below the level of ownership) often exist and may be difficult for outsiders to discern, particularly with respect to common property resources as pastures and water. In the case of Senegal, land allocation decisions by rural communities' heads are on occasion made non-transparently without consulting the village level and to the detriment of the interests of villagers. The project will address these risks using a variety of tools – by carefully screening potential investment locations, by checking the efficiency of the consultation process involving all local levels driven by rural communities, by deploying and monitoring relevant safeguards instruments, and by providing support for land use rights inventories, participatory planning, enhanced consultations, strengthened negotiation capacity and contract design.

114. A three-phase village consultations process was held over a 10-month period in order to consult and inform the populations on the project, and especially provide a transparent forum for discussion on the issue of land. The proposed land allocation process was discussed with the local communities at village level. In addition to group consultations, a survey was conducted at the individual level on a stratified random sample of villagers in the project area. All nine rural communities targeted by the project confirmed their full support to the project and the proposed land approach. Furthermore, the individual survey results indicated that 98% of the surveyed villagers reported their agreement to the project.

115. External economic shocks may cause investors to refrain from actively engaging in the agricultural sector, or in the geographical areas targeted by the project. The project has been designed to provide a menu of incentive packages that are expected to address key investment constraints. However, certain risks, such as macroeconomic performance and global economic events that would negatively affect competitiveness and profitability, are outside the control of this project. Senegal will be particularly sensitive to European demand for agricultural products. Price volatility is also an important factor to be considered. Shocks on the supply side (droughts, floods, etc.) as well as shocks on the demand side (economic slowdown of important consumers, etc.) explain the high volatility of international agricultural markets. The uncertainty of revenues is a main factor can prevent SMEs from entering this segment. This project would thus implement mechanisms to mitigate the risks for smallholders (these may include pre-agreed prices on produce in the context of contract farming arrangements).

116. Given the multitude of public actors and the need for close collaboration to carry out complex tasks, there is a risk of insufficient coordination capacity. A lack of incentives to undertake institutional and business process reforms constitutes another implementing agency risk. The project will devote substantial resources to institutional strengthening among the technical implementing agencies, both at the coordination level as well at the policy and

technical levels. In addition, a PCU will be established as well as a high-level Steering Committee. Financial management arrangements will be set up at the PCU level in order to meet the Bank's minimum requirements under OP/BP10.00. The overall fiduciary risk rating is expected to be downgraded from Substantial to Moderate, once the mitigation measures are implemented.

117. The risk of elite capture exists. Local communities may be marginalized from discussion of land use (negotiations over rents, lease periods, etc.) and receipt of monetary and nonmonetary resources that flow from investors to communities. Key to addressing this risk will be to ensure meaningful consultation with all segments of affected communities and full transparency in allocation decisions and the terms of agreed investment contracts. Towards this end, the project will be implemented in accordance with the Land Framework and the principles and processes set forth therein.

VI. APPRAISAL SUMMARY

A. Economic and Financial Analyses

118. An economic and financial analysis was undertaken to assess the impact of the project's proposed intervention and the expected financial benefits for the different beneficiaries, through all components. Annex 7 provides the detailed assumptions and results of the analysis. As required by GEF, an incremental cost analysis was carried out (see Annex 9).

119. Five types of beneficiaries were considered: small producers, medium producers, wagedworkers, rural communities, and general population through fiscal revenues and additional investments. Large producers are not considered as beneficiaries, but rather as contributors. In this economic and financial analysis, we assume that their presence is a mean to an end, resulting in more fiscal revenues, more jobs in the region, a direct financial contribution to rural communities, additional investment in the region and linkages with medium and small producers.

120. The project will develop 10,000 ha of irrigated land. To simplify, the economic and financial analysis assumed 20 blocks of 500 ha, each shared between an investor and local farmers (small and medium), as follows: 250 ha for the investor, 150 ha for medium farmers (with an average surface area of 16 ha) and 100 ha for small farmers (with an average surface area of 2.5 ha).

121. Two main sustainable land management practices have been considered for both project areas: methods for soil fertility²⁹ and methods to prevent land degradation. For the purpose of the analysis, it is assumed that the economic benefits of such practices lie in the combined effect of increased crop production and decreased financial resources needed for purchasing fertilizers³⁰. After a few years, farmers will pay for 70 percent of the cost of fertilizers they would have paid without SLM practices.

²⁹ Fertilizers are considered as one tool towards integrated soil health and increased carbon sequestration.

³⁰ Liniger, H.P., R. Mekdaschi, C. Hauert and M. Gurtner (2011), Sustainable Land Management in Practice -Guidelines and Best Practices for Sub-Saharan Africa. TerrAfrica, World Overview of Conservation Approaches and Technologies (WOCAT) and Food and Agriculture Organization of the United Nations (FAO).

122. The team first assessed the financial sustainability of each beneficiary with and without the project. The following table presents the results for each of those economic agents. A distinction was made between farmers in contract farming and independent farmers. The team also took into account farmers' associations or *Groupement d'Intérêt Economique, GIE*. Contract farming results in higher margins for all stakeholders. Large producers participate in this kind of arrangement to meet specific volume requirements and to minimize disruptions in supply, especially in a context where access to land is limited. However, constraints should not be overlooked. Contract farming is a long process and the benefits are partially offset by substantial extension services.

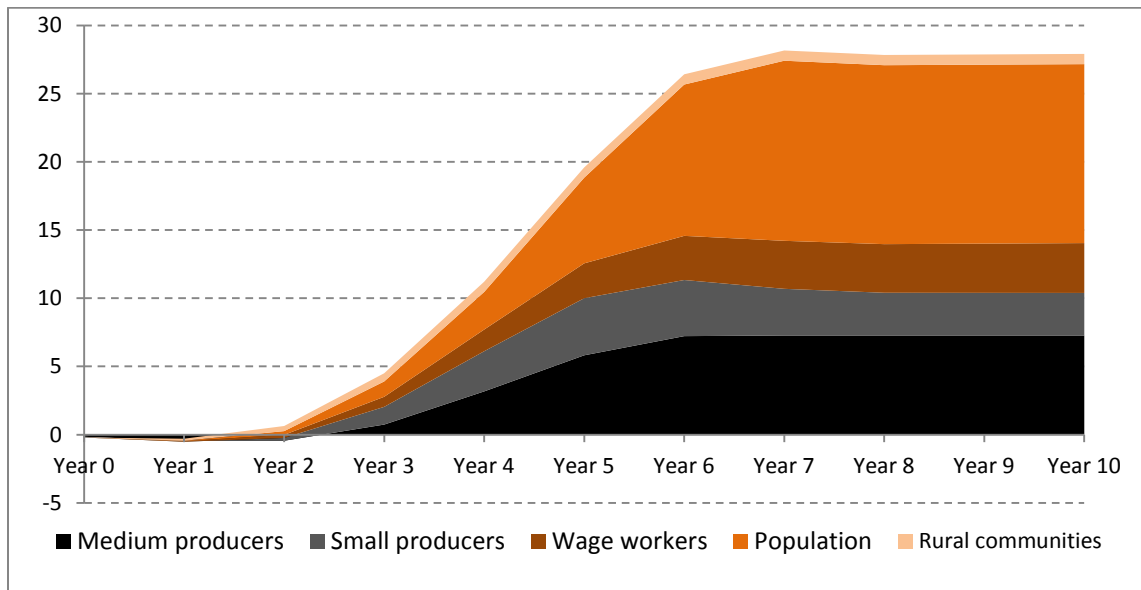
Results - Net margin after 10 years (percent)		
	Independent	Contract Farming
Large producers	21	20
Medium farmers	14	23
Small farmers	13	24
Small farmers in GIE	27	33

123. The calculation of the economic rate of return (ERR) for the project is based on five types of assumed flows. First, it is assumed that investors will pay lease fees to rural communities based on the surface area at a rate of \$150, comparable to current fees paid in the region. Second, investors and medium farmers will create jobs, thereby contributing to increase households' revenues. Third, investors and small and medium farmers will also pay taxes that will be redistributed within the population. Fourth, small and medium farmers increase their own revenues.

124. The total investment is estimated to result in a NPV of US\$46 million and an ERR of 18 percent with a discount rate of 10 percent. The reference scenario is rather conservative in terms of prices.

125. The region (referred to as "Population" in the graph below) is the largest beneficiary of the project (through fiscal revenues and additional investments made by the large investors), followed by medium producers and wage workers. Women will be the main beneficiaries of the project in numerical terms, since they constitute the bulk of wage workers in farms. More than 65 percent of direct beneficiaries will be women. However, they may be engaged in low-value activities, thereby contributing to about 35 percent of additional revenues.

Additional revenues from the project (in US\$ million)



126. The following table indicates the contribution per type of flows. Large investors are the main contributors.

Table No. 5. Contribution per type of flow (US\$ Million)

Contribution	Tax	Jobs	On-farm revenues	Lease fees	Additional investments	Total
Large investors	2.9	2.8	0	0.8	6.9	13.4
Medium farmers	2.2	0.9	7.3	0	0	10.3
Small farmers	1.1	0	3.1	0	0	4.2

127. The SSIAP is one of the key projects geared toward achieving the objective of the CPS under pillar one to accelerate inclusive growth. As agreed in the CPS, the Bank will focus on areas that are considered as *key constraints to development* by the Government and local populations, and where the Bank has a *comparative advantage*, where there is a *window of opportunity for reform*, and where Government and/or the private sector and other donors seek to work in *partnership* with the Bank. In this area, the Bank has a strong comparative advantage since it can mobilize resources in different areas (agriculture, private sector development, financial inclusion).

128. Substantial infrastructure work, namely irrigation systems, needs to be carried out and justifies a public intervention. In addition, GoS needs to align workers' skills with firms' demand which requires dedicated training. Lastly, agricultural markets are imperfect. Small farmers have limited (if any) access to finance, since commercial banks perceive loans to farmers as particularly risky. Not surprisingly, banks are lending to small farmers only if those farmers are in contract farming where prices are set up in a contract between the farmers and the agribusiness. The commercial banks thus prefer an arrangement where prices are less volatile and revenues for farmers are more stable. The project will help lower this barrier for small farmers by contributing partly to initial investment costs.

B. Technical

129. The technical approach embodied within the project reflects a number of background analytical studies: (i) in-depth analysis of the opportunities and constraints in the horticulture sector (with a particular focus on the Ngalam Valley and Lac de Guiers areas) developed as part of the Accelerated Growth Strategies; (ii) the master plan to develop irrigation around the Lac de Guiers; (iii) the studies of the Ngalam Valley developed as part of the “Irrigation and Water Resource Management Project” funded by the MCA; (iv) studies on the revitalization of the Ndiel funded by the Dutch Technical Cooperation Agency; and (v) analysis of the land tenure system. Other studies used for the project design relate to the assessment of the national land and forest degradation problems (in particular the Land Degradation Assessment in Drylands, LADA, of SLWM practices in 2010 and National Strategy of protected areas in the region of Saint Louis issued in 2010, see Annex 11).

130. The approach is consistent with that used in a growing number of similar Bank projects in the region, while at the same time being innovative and nuanced to reflect local conditions. Experience with existing projects in Senegal, such as the PDMAS, have been instrumental in feeding back emerging experience in facilitating access to land and in validating the inclusive approach adopted by the project.

131. That said, the agribusiness agenda is at the forefront of development thinking and therefore maintaining high-level technical inputs to the project to ensure the continued application of best practice will be critical. This implies the need for potentially expensive international technical assistance.

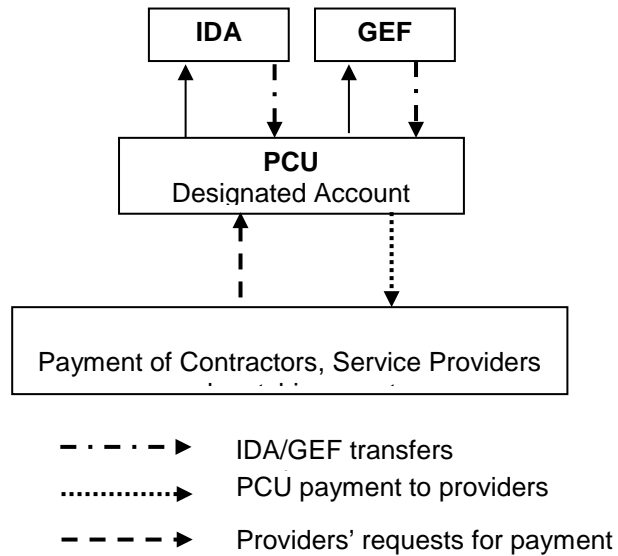
132. The proposed SLWM approach is in line with the good practices and lessons emerging from the SAWAP initiative and other related GEF projects including in Senegal.

C. Financial Management

133. A Project Steering Committee (PSC) will be responsible for project implementation oversight and will approve all budgets, work programs and technical and financial progress reports prepared by the PCU and the technical implementing agencies.

134. The PCU will execute all fiduciary responsibilities - coordination of the financial management and accounting activities including monitoring financial transactions on the project's accounts, preparing the annual financial statements, providing quarterly Interim Financial Reports, and making necessary arrangements for the annual financial audit. It will not delegate fiduciary responsibilities to technical implementing agencies.

135. The conclusion of the assessment is that financial management arrangements have to be set up and do not yet meet the Bank's minimum requirements under OP/BP10.00. The overall fiduciary risk rating is assessed as Substantial and is expected to be Moderate once the mitigation measures are implemented. The chart below describes the flow of funds arrangement from the Designated Accounts:



D. Procurement

136. Procurement activities will be managed by the PCU. The PCU will have overall responsibility in carrying the following activities: (i) managing the overall procurement activities, and ensuring compliance with the procurement process described in the relevant manuals; (ii) preparing and updating procurement plan annually; (iii) preparing bidding documents, draft Request For Proposals (RFPs), evaluation reports, and contracts in compliance with WB procedures; and (iv) seeking and obtaining approval of national entities and of IDA on procurement documents as required.

137. Procurement of goods and consultants' services will be carried out in accordance with the 'Guidelines On Preventing and Combating Fraud and Corruption in Projects Financed by IBRD Loans and IDA Credits and Grants' dated October 15, 2006 and updated January 2011, and the 'Guidelines: Procurement of Goods, Works and Non-consulting Services under IBRD Loans and IDA Credits' published by the Bank in January 2011 and the 'Guidelines: Selection and Employment of Consultants by World Bank Borrowers,' dated January 2011, the Financing Agreement and the Procurement Plan approved by the Bank.

138. Assessment of SAED's capacity to implement certain procurement activities. SAED is the largest agricultural public agency in Senegal. The institution is familiar with the World Bank procurement and consultant guidelines and the national procurement procedures and has been the implementing agency for the PDMAS. The institution has a solid background in procurement activities as it worked with more than ten technical and financial development partners such as the World Bank, African Development Bank, (AfDB), Agence Française de Développement (AFD), Islamic Development Bank (IsDB), European Union (EU), United Agency for International Development (USAID), etc. The institution has manuals of procedures which have to be updated to take into account the specificities of the proposed project. SAED will be responsible for the technical preparation of procurement tenders related to the activities it will

implement. These procurement documents will then be submitted to the PCU for review and submission to the national entities and IDA.

139. The key risk identified is that staff involved in the project and responsible for process control and approval may lack experience with Bank procedures. This could cause misprocurement and/or rigidity in the interpretation of Bank procedures, leading to slowness in procurement decisions, reputational risks to the Bank and the project, and delays towards attaining the PDO.

140. The residual project risk for procurement is *moderate* after adoption of the following mitigation measures: (i) two qualified procurement specialists will be recruited to ensure compliance with World Bank procurement procedures; S/he will be based within the PCU; (ii) a manual of administrative, financial and accounting procedures will be prepared as part of the PIM, to clarify the role of each team member involved in the procurement process, specifically with regards to the review and approval system; (iii) a workshop will be organized at the beginning of the project to train all key stakeholders involved in procurement on World Bank procurement procedures and policies; and (iv) an adequate, centralized filing system will be set up for the project records at the PCU. The project will finance appropriate equipment, and the procurement specialists will be trained to ensure compliance with the Bank's procurement filing manual.

E. Social (including Safeguards)

141. It is anticipated that SSIAP will have positive social impacts at the household and community levels. The project activities will lead to an increase in household incomes for participating farmers, improved agriculture and SLWM related capacity (such as knowledge on use of technology and improved farming methods) and it is expected to result in monetary and non-monetary benefits at the community level (as a result of community negotiations with private investors).

142. SSIAP triggers OP 4.12 on Involuntary Resettlement as the project may require the involuntary acquisition of land for civil works such as the construction, rehabilitation and maintenance of irrigation canals, extension of power lines, etc. The project will not support the assembling of land for agricultural investment through compulsory acquisition by the state, relying instead on land that has been voluntarily allocated for those purposes by communities. Nevertheless, project-supported activities may lead to land use changes, and affect user rights, if communities decide to reorganize their land to facilitate land allocation agreements with investors or the reconfiguration and improvement of plots in connection with the project.

143. The counterpart has prepared a Resettlement Policy Framework (RPF) scope of which includes involuntary land acquisition (for reasons of public interest) for public infrastructure, voluntary agreements between investors and rural communities and a comprehensive discussion of mitigation measures to address land issues as per Annex 6. The latter has been included as Annex 10 of the RPF. The RPF was publicly disclosed in-country on November 4, 2013 and at the World Bank InfoShop on October 30, 2013. Much of the land on which investments may be supported is administered by the rural communities. There is often a complex array of subsidiary interests present on these lands, which are generally un-documented. These may include, among

others: (i) long-term customary rights derived from membership in the community; (ii) tenancies of varying durations, including migrants (or so-called “strangers”) from outside the community, some of whom may have been present for generations and others of recent origin; (iii) sharecropping arrangements; and (iv) pastoral and other rights over common property. A review of the land tenure system has been also conducted as part of project preparation. Its findings have been used to guide the legal land tenure arrangements under the project.

144. Given the common presence of multiple land users and land rights holders in a given piece of land, it may be difficult for the project to ascertain that what the rural community characterizes as a voluntary transaction does in fact represent an informed and voluntary choice on the part of the community as a whole. There exists in such situations the risk of elite capture and coercion of choices, hence the importance of having the RPF as a tool to ensure that the procedural and substantive rights of all local people are appropriately addressed. A social screening form and associated procedures are included in the RPF, for each candidate sub-project for SSIAP financing to undertake prior to Bank approval of the associated subproject. The project is also supporting the carrying out of land use rights inventories and participatory community decision-making to help obviate the risk of unintentional displacement of rights or livelihood activities.

145. No person will be required or asked to relinquish land that they are currently using to accommodate an investment or associated activities (such as the establishment of associated infrastructure or land development for preparation of smallholder plots) without being provided secure tenure over alternative land of at least equivalent quality and without appropriate support for restoring or improving livelihoods.

146. The choice of an RPF is due to the fact that specific sites for investments are currently unknown and not expected to be known before project effectiveness. The RPF provides guidance on the preparation of a Resettlement Action Plan (RAP) for each investment site, as it is identified, and in the case that it presents the likelihood of resettlement-related impacts.

147. Both investors and smallholder farmers will have to comply with SSIAP safeguards requirements. As highlighted in the environmental section below, the ESMF and RPF provide processes and conditions for determining the eligibility of investments or activities for project support. The project will not support (nor are private sector investors likely to be interested in) investments on land the legal status of which is affected by significant ambiguities, including disputes within communities or between different claimants, boundary disputes, disputes between customary owners and the state, or persisting complaints stemming from prior state land acquisitions. The RPF specifies procedures to ensure the due diligence screening of land for these and other key social issues.

148. The RPF identifies groups that are susceptible to marginalization from the process of decision-making on land use, including women, migrant farmers, and pastoralists. Among the mitigation measures included in the RPF are: the use of a checklist to ensure inclusion of vulnerable groups such as women during investment screening; and inclusive consultations with land users and landowners on investments, especially during negotiations between investors and communities. More details are provided in Annexes 3 and 6.

Women in Agriculture

149. Gender is an important dimension of the SSIAP, particularly with regard to the inclusion of women as direct project beneficiaries and stakeholders in SLWM and forest management, the inclusion of women's voice in decision-making processes, the impact of changes to the intra-household allocation of resources, and the protection of women from negative indirect effects of the project.

150. The project design promotes women's inclusion as beneficiaries and thus seeks to diminish gaps in earnings and productivity by supporting a menu of options for women's inclusion in commercial agriculture ventures. The project design follows a flexible approach to women's inclusion in investments and activities in order to consider site-specific contextual factors (such as crops under production, cultural specificities, etc.). Specifically, the project will require investors to commit to women's inclusion in investments using at least one of several mechanisms informed by the context in which the investors and proposed agricultural activities will be operating.³¹ These mechanisms will be detailed in the PIM, and are expected to include such elements as: (i) a *minimum percentage of women as smallholders with land user rights*. This will involve an implicit requirement that women may obtain land-use rights from family heads or community leaders so as to be able to participate in the project scheme; (ii) a *minimum proportion of women employed as contract farmers*, for example, in situations in which investors lease significant tracts of land for crop production; and (iii) a *minimum proportion of women beneficiaries* for training, inputs, and irrigation equipment.

151. SSIAP will ensure that all community members, including women, are aware of their rights to land, by promoting inclusive training within the community. In addition, the project will ensure representation for women in the land allocation process and guarantee women's organizations representation during discussion, debates, and decision-making, both internally and with agribusiness investors. Finally, by encouraging and supporting the creation of *Groupement d'Intérêt Économique* (GIE), including participation of women and youths, the project will facilitate access to land, as well as water and technical assistance.

152. Women are also the protagonists in activities related to the management and use of forest resources. Particularly important is the gathering of fuelwood for domestic energy, as well as fruits, leaves, gums and medicinal products both for household use and for sale in local markets. The project will empower women to ensure a better use, management and control of forest and land and water resources through participatory diagnostic, mapping and management plan development process.

F. Environment (including Safeguards)

153. SSIAP triggers the following environmental and social safeguard policies: Environmental Assessment (OP/BP 4.01), Natural Habitats (OP/BP 4.04), Forests (OP/BP 4.36), Pest Management (OP 4.09), Physical Cultural Resources (OP/BP 4.11), Involuntary Resettlement

³¹ That is, due to the crop choice, the farming technology available, cropping technique as well as the cultural setting may imply that aiming at a strict quota is not feasible. In these instances, it may be more applicable to allow investors/farmers to choose another alternative for promoting women's inclusion from a menu of interventions.

(OP/BP 4.12), International Waterways (OP/BP 7.50), and Dam Safety (OP/BP 4.37). The Counterpart has prepared an Environmental and Social Management Framework (ESMF). A Pest Management Plan (PMP) was prepared to fulfill OP 4.09 requirements. Both the PMP and the ESMF were publicly disclosed in-country on August 10, 2012 and at the World Bank InfoShop on April 1, 2012 and August 1, 2012 respectively.

154. The SSIAP is rated a category A project. It is expected to have positive environmental impacts through its support for commercial agriculture investment schemes that promote the better use of land and water resources and its support for sustainable forest management. Potential environmental risks include: (i) point and nonpoint pollution of water sources, especially water pollution and bank erosion in Lac de Guiers, which is the main drinking water source for Dakar; (ii) issues associated with the improper use, handling and storage of agricultural chemicals; (iii) negative environmental impacts associated with the rehabilitation of irrigation or small-scale civil works and water stations and/or warehouse for food processing or storages; (iv) construction, rehabilitation and maintenance of irrigation canals, access roads, extension of power lines to connect commercial farmers and agro-processing facilities; (v) agricultural development and commercialization which will lead to increased production volumes and value added processing and marketing capacity of agribusiness involved in commodity chains and warehousing facilities; (vi) increase in waterborne diseases, such as malaria, intestinal and urinary bilharzia and increase in HIV/Aids and other sexually transmitted diseases; (vii) expansion of invasive plant species, such a *Typha australis* and water hyacinth and others; (viii) the risks of potential transgenic crops; (ix) reduction in grazing areas and risks of impacts on wetlands (Ndiael, a Ramsar site: migratory birds) through the invasion of pastoralists and impacts on transhumance corridors, which could lead to increased conflicts between farmers and pastoralists; and (x) potential impacts on the remaining forests in the area, which could result a decrease of biodiversity in the area and an increase in the scarcity of fuel wood resources.

155. The project would be demand-driven and would possibly explore a variety of saleable agriculture crops for development in Senegal, including transgenic. If transgenic crops become part of the crops list supported under the project, the project will apply environmental safeguards consistent with international good practice and also comply with Senegal's regulatory framework and its obligations under the international treaties to which it is a party, including the Cartagena Protocol on Biosafety. Potential adverse environmental impacts associated with the proposed SSIAP activities such as: post-harvests and handling equipment and means; technology and marketing at agro-enterprise level; and handling, transportation, storage and processing assets improvements will be minor, site specific, and handled under safeguard measures already in place for ongoing activities.

156. A detailed Environmental and Social Management Framework (ESMF) was developed and published during project preparation for works still to be identified during execution. The specific environmental and social impact assessment and management plans will be developed during implementation. There will be close monitoring of safeguards during implementation under the supervision of the PCU social and environmental safeguard experts.

157. The ESMF sets forth the basic principles and procedures for screening and mitigating potential adverse environmental and social impacts from each investment candidate for SSIAP financing. Similarly, the PMP is designed to address the risk that intensification of agricultural

activities may lead to increased use of pesticides and herbicides that, if unmanaged, could result in negative impacts on human and animal health and on the physical and natural environment. Provisions have also been established in the ESMF to ensure appropriate capacity building for all key stakeholders involved in SSIAP activities and intervention zones.

158. Once the physical locations and design of the SSIAP intervention areas are defined, the Borrower will prepare and publicly disclose in a timely and appropriate manner site-specific Environmental and Social Impact Assessments (ESIAs) as necessary to provide mitigation measures for any foreseen social and environmental aspects on the proposed intervention site. The ESIA will also be publicly disclosed, both in-country and in the Bank's InfoShop, prior to the physical start of the activity.

159. Mitigation measures under the Project will include: the application of Integrated Pest Management (IPM) practices and the application and promotion of pesticide management practices outlined in the guidelines of the International Code of Conduct on the Distribution and Use of Pesticides; risk management for transgenic crops through the national framework and international best practice; and the use of ESIA's and Environmental and Social Management Plans (ESMPs) as appropriate for minor civil works.

160. The World Bank OP 4.04 on Natural Habitats has been triggered in this project, as the project will support activities near natural habitats, classified forests and other natural reserves and agricultural activities may affect or be close to Natural Habitats. There is a potential that pastoralists will move away from the project zones and invade the nearby protected wetland areas (Ndiael, a Ramsar site with significant migratory bird populations). While the project is not expected to affect critical natural habitats, ESIA's/ESMPs prepared during implementation will address any impacts to natural habitats. The project will avoid adverse impacts on natural habitats and, where necessary, appropriate plans will be prepared to avoid or adequately mitigate these impacts, especially on neighboring communities.

161. The World Bank OP 4.36 on Forests has been triggered, since expansion of agricultural areas has a potential to encroach on surrounding forest areas and since the project supports activities in classified forests under component 2.2. The project will support the participatory diagnostic of management issues, the mapping and delineation of the forest boundaries and assist with development of management plans. These measures are expected to enhance the status of these protected areas.

162. The project also triggers OP 4.37 on Dam Safety. The OMVS, which has the final responsibility for the operation of the Diama and Manantali dams, has carried out dam safety assessments for both dams in 2001 and 2011 respectively. The relevant safety inspection reports mainly focus on hydroelectric and mechanical equipment, and do not contain the safety review of the civil engineering structure of the dam. The Bank also has received copies of the O&M Plans. To further ensure compliance with OP 4.37, the recipient will be required per the Financing Agreement to develop a full-fledged emergency preparedness plan for each dam, and to enter into an agreement with OMVS, requiring OMVS to carry out periodic inspections of the dam at least every 5 years by independent experts, including a civil structure and dam safety specialist. A Framework of Emergency Preparedness Plan for the Diama and Manantali Dams was prepared and submitted to the Bank on November 15, 2013.

163. The project also triggers OP/BP 7.50 as some project activities are expected to involve use of irrigation water from the Senegal River. The Senegal River flows through four riparian countries, namely Guinea, Mali, Mauritania and Senegal. On November 2012, the Government sent a Notification Letter of the proposed Project activities and their impact on water use to the High Commissioner of the OMVS, an authority established in 1972 by a treaty among the riparian countries, empowered to authorize the development of infrastructure and projects planned by its member-countries that could have significant impacts on the water resources of the basin. The Government received a response from the OMVS High Commissioner dated February 5, 2013, indicating that the OMVS will take all necessary actions with the Permanent Water Commission (*Commission Permanente des Eaux*) in order to make available the amount of water required for the project.

164. OP/BP 4.11 on Physical Cultural Resources is also triggered as civil works for the construction of canals and land preparation may lead to land excavation activities in the region. The ESMF includes measures for dealing with existing cultural sites and chance finds of physical cultural resources. In case the project is likely to have adverse impacts on physical cultural resources, appropriate measures for avoiding or mitigating these impacts will be identified and addressed in the ESIA, for subprojects to include such mitigation measures before any type of works is undertaken.

165. Considerable development activities have taken place in the Senegal River Delta since 1972. The SSIAP itself will have limited cumulative impacts, as described in the ESMF, but the project will finance an Environmental Audit to identify cumulative impacts over the last decades and identify issues how to: (i) improve environmental and social management of the Delta's resources, e.g. optimize water resources use, management of water quality, re-flooding of areas for economic development and biodiversity conservation, management of saline intrusion, etc.; and (ii) improve planning of irrigation development and management and other economic development activities in the Delta in order to achieve a more sustainable development outcome.

Annex 1: Results Framework and Monitoring
REPUBLIC OF SENEGAL: Sustainable and Inclusive Agribusiness Project

Project Development Objective (PDO):
 Develop inclusive commercial agriculture and sustainable land management in project areas

PDO Level Results Indicators	Core	Unit of Measure	Baseline	Cumulative Target Values*						Frequency**	Data Source/ Methodology	Responsibility for Data Collection	Description (indicator definition etc.)
				YR 1	YR 2	YR3	YR 4	YR5	YR6				
Indicator One: Annual value of commercial agriculture in project areas	<input checked="" type="checkbox"/>	Tonnes	0		1,000	10,000	30,000	60,000	100,000	Quarterly	Investor survey, SAED, Customs, Service du Port Autonome of Dakar, OLAG, DRDR Saint-Louis et LOUGA, Technician responsible for the data collection inside one block	PCU	
Indicator Two: Annual value of commercial agriculture in project areas	<input type="checkbox"/>	US\$ Million	0	0	2	15	40	80	120	Quarterly			
Indicator Three: Number of jobs created in project areas	<input type="checkbox"/>	Number	0	0	150	900	2500	6000	9500	Annually	Investor Survey	PCU	The term “jobs” will refer to wage workers
- of which women	<input type="checkbox"/>	Number	0	0	100	600	1,700	4,200	6,600				
- of which hired by large investors		Number	0	0	100	600	1,700	4,200	6,600				
Indicator Four: Land area where sustainable land management practices have been adopted as a result	<input checked="" type="checkbox"/>	Hectares	0	0	500	2000	5000	8000	10000	Annually	Investor Survey, Household Survey (also used for Impact Evaluation),	PCU	Sustainable land management includes water management Will be considered as a

PDO Level Results Indicators	Core	Unit of Measure	Baseline	Cumulative Target Values*						Frequency**	Data Source/ Methodology	Responsibility for Data Collection	Description (indicator definition etc.)
				YR 1	YR 2	YR3	YR 4	YR5	YR6				
of the project											INP, ANCAR, DRDR, BRICKS		land area with SLM a surface where practices are adopted to: increase water use efficiency, increase soil fertility, prevent, mitigate or rehabilitate land degradation.
Indicator Five: Direct Project Beneficiaries	<input checked="" type="checkbox"/>	Number	0	50	335	1410	3300	6980	10680	Annual	SAED (for training) APIX (for large investors) PCU for small and medium farmers, and SMES outside the blocks, Investor survey for wage workers	PCU	Beneficiaries include: small and medium farmers, wage workers, investors, wage workers, SMEs
- of which women	<input type="checkbox"/>	Number	0	10	150	750	2200	4500	6900				
- of which SMEs	<input type="checkbox"/>	Number	0	0	0	20	50	100	200				
- of which smallholders	<input type="checkbox"/>	Number	0	40	150	400	600	700	800				
- of which medium farmers	<input type="checkbox"/>	Number	0	10	35	90	150	180	180				
- of which wage workers	<input type="checkbox"/>	Number	0	0	150	900	2500	6000	9500				
Indicator Six Forest area brought under management plans	<input checked="" type="checkbox"/>	Hectares	0	0	1000	5000	10000	15000	25000	Annual	Grande Muraille Verte and Ministère de l'Environnement	PCU	

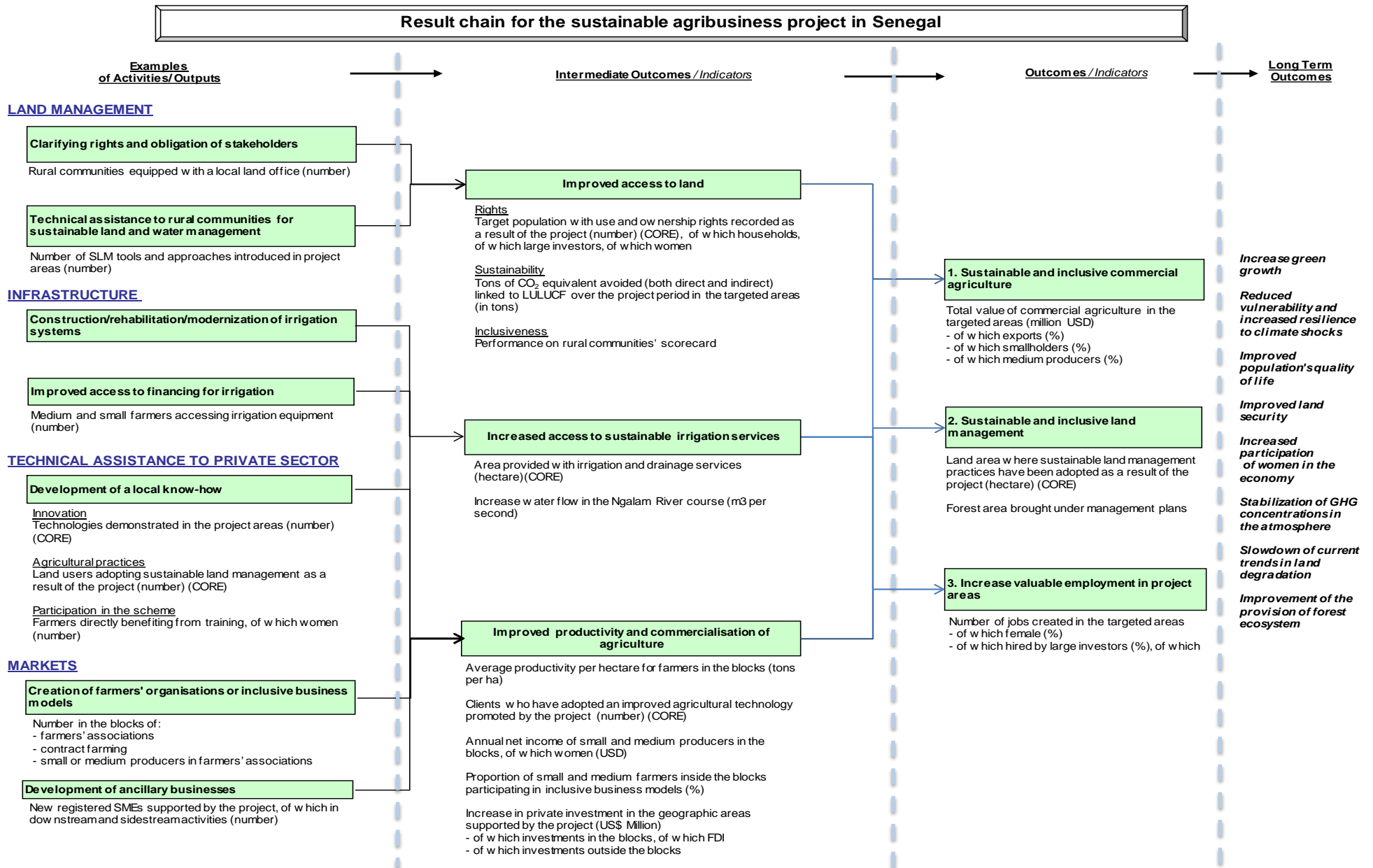
INTERMEDIATE RESULTS

Intermediate Results Indicators	Core	Unit of Measure	Baseline	Cumulative Target Values*						Frequency**	Data Source/ Methodology	Responsibility for Data Collection	Description (indicator definition etc.)
				YR 1	YR 2	YR3	YR 4	YR5	YR6				
Intermediate Result (Component One): Support to sector actors													
Intermediate Result indicator one: Target producers with use rights recorded as a result of the project	<input type="checkbox"/>	Number	0	20	100	220	450	600	600	Annually	Rural communities and SAED	PCU	
- of which large investors	<input type="checkbox"/>		0	0	0	2	5	8	10				
Intermediate Result indicator two: Annual performance on rural communities' scorecard	<input type="checkbox"/>	Number	0	-	-	3	6	-	9	Three times during project's duration	Scorecard survey	PCU	Scorecard: - Beneficiaries feel they benefit from the presence of the private sector - Beneficiaries feels that the consultation process was well managed
Intermediate Result indicator three: Increase in private investments in project areas	<input type="checkbox"/>	US\$ Million	0	0	21	52	83	155	260	Annual	Investor Survey, PCU	PCU	
- of which investments in the blocks	<input type="checkbox"/>	US\$ Million	0	0	20	50	80	150	250				
- of which inv. outside the blocks	<input type="checkbox"/>	US\$ Million	0	0	1	2	3	5	10				

Intermediate Results Indicators	Core	Unit of Measure	Baseline	Cumulative Target Values*						Frequency**	Data Source/ Methodology	Responsibility for Data Collection	Description (indicator definition etc.)
				YR 1	YR 2	YR3	YR 4	YR5	YR6				
Intermediate Result indicator four: Area provided with irrigation and drainage services	<input checked="" type="checkbox"/>	Hectares	0	0	500	2000	5000	8000	10000	Annual	SAED	PCU	Measures the total area of land provided with irrigation (primary, secondary and/or tertiary) and drainage services under the project
Intermediate Result indicator five: Average productivity per hectare for farmers inside the blocks (for the main crops)	<input type="checkbox"/>	Ton per hectare								Per cropping season	SAED, Technician in each block		Crops to be monitored will be precisely defined regarding the crops inside the blocs
- Sweet potatoes			0	15	20	22	25	27	30				
- Onion			0	15	20	22	25	27	30				
Intermediate Result indicator six: Proportion of small and medium farmers inside the blocks participating in inclusive business models	<input type="checkbox"/>	Percentage	0	0	10	20	30	40	50		Investor Survey, SAED, Technician in each block	PCU	Farmers in contract farming with larger investors
Intermediate Result indicator seven: Proportion of small and medium farmers who adopted an improved agricultural technology promoted by project	<input checked="" type="checkbox"/>	Number	0	0	50	200	500	800	1000	Annual	DAPSA	PCU	

Intermediate Results Indicators	Core	Unit of Measure	Baseline	Cumulative Target Values*						Frequency**	Data Source/ Methodology	Responsibility for Data Collection	Description (indicator definition etc.)
				YR 1	YR 2	YR3	YR 4	YR5	YR6				
Intermediate Result (Component Two): Investments in natural resources management													
Intermediate Result indicator eight: Increase in the water flow in the Ngalam River course	<input type="checkbox"/>	Cubic meters per second	3	3	8 (increase due to MCA project)	8	15 (increase due to SSIAP project)	15	15	Trimestral	SAED	PCU	Increase in flow resulting from the MCA project and SSIAP
Intermediate Result indicator nine: Carbon stored in forest ecosystems and emissions avoided from deforestation and forest degradation		CO2 metric tone	0	0	0	0	200,000	400,000	600,000	Annual	Centre de Suivi Ecologique (CSE), FAO	PCU	
Intermediate Result indicator ten: Capacity to monitor GHG emissions in project areas is demonstrated	<input type="checkbox"/>	Yes/No	N	N	N	N	Y	Y	Y	Annual	Centre de Suivi Ecologique (CSE), FAO	PCU	
* Data will be refined later through an in-depth baseline analysis													
** Target values should be entered for the years data will be available, not necessarily annually													

Figure 1: Results Chain



Annex 2: Detailed Project Description

REPUBLIC OF SENEGAL: Sustainable and Inclusive Agribusiness Development Project

Project Objectives

1. The Project Development Objective (PDO) is to develop inclusive commercial agriculture and sustainable land management in project areas.
2. This will be done through investments in infrastructure (irrigation in particular), technical assistance to key public institutions (rural communities in particular) and support to the private sector (including smallholders) all along the agribusiness value chains.
3. The project will develop and implement inclusive and sustainable solutions, in particular with respect to community-driven land and water management systems, which will be scalable and replicable in other regions of Senegal.
4. The definition of SLWM adopted in this project is based on TerrAfrica's definition: the adoption of land use systems that, through appropriate management practices, enables land users to maximize the economic and social benefits from land while maintaining or enhancing the ecological support functions of the land resources. SLWM includes the sustainable management of soil, water, vegetation and animal resources. It involves a holistic approach that integrates social, economic, physical and biological assets.

Project Beneficiaries

5. Direct beneficiaries are estimated at more than 10,000 people (including a substantial number of women) and more than 100 enterprises in the Ngalam Valley and Lac de Guiers areas in St Louis and Louga Regions:
 - (a) 800 smallholders, to be engaged in commercial sustainable agriculture through technical assistance and partial financing of their establishment costs as well as other households that will have an access to irrigated land and which will be engaged in subsistence agriculture;
 - (b) 180 medium farmers, who will expand their current production (scale and scope) by investing in the blocks;
 - (c) 9,500 wage workers, who will work in all type of activities across the value chain;
 - (d) Around 100 SMEs: SMEs will benefit from the improvement in access to land, irrigation, and technical assistance provided. The increase in transparency and predictability of land allocation processes will benefit SMEs, which normally tend to have limited bargaining power;
 - (e) The increase in transparency and predictability of land allocation processes will also benefit large investors (around 20) by reducing uncertainty and transaction costs. It is also expected that improvement in access to land and primary irrigation infrastructure will considerably unlock private investment from large investors;
 - (f) Government and private sector agencies: the project will directly support various Government and private sector agencies playing a key role in the sector (SAED, Office du Lac de Guiers, rural communities, APIX), the DAPSA and the Directorate of

Horticulture of the Ministry of Agriculture, the Cooperation Federative des Acteurs de l'Horticulture du Sénégal (CFAHS), research institutes (Horticultural Development Centre, ISRA), Gaston Berger University and the Horticultural Centre of Vocational Training (CFPH). In addition to the direct capacity building for these specific agencies, the improved transparency and efficiency of the agencies supported by the project are expected to increase public confidence in the public institutions.

6. Indirect beneficiaries include:

- (a) Additional household members of smallholders and wage workers (4 members per household);
- (b) Value chain stakeholders who would benefit from increased supplies of agricultural commodities and business opportunities generated by the irrigation schemes and supporting infrastructure;
- (c) Workers (and their household members) in various enterprises that will directly benefit from training and assistance through the Agribusiness Innovation Center, which is expected to improve their productivity, which is a fundamental determinant of their salaries;
- (d) Consumers – particularly in urban areas – who would benefit from improved (quantitative and qualitative) supplies of agricultural products.

Geographic Focus³²

7. The *Ngalam Valley and Lac de Guiers in the St. Louis and Louga regions* have several attractive features and advantages that the project can leverage and build on including:

- (a) Strong demand from private sector as agro-ecological conditions are highly suitable for horticulture (cooler climate due to marine breeze in the Ngalam Valley, sandy soils in both zones, easy access to water around the Lac de Guiers). The region has potential beyond horticulture (e.g. dairy, meat processing and fisheries).
- (b) High potential for irrigation throughout the year
- (c) Sizable stock of land (10,000 – 15,000 ha) available in the Ngalam Valley, more than 40,000 ha around Lac de Guiers.
- (d) Fair road linkage with Dakar with the national road passing through Gandong-Rao-Fass-Mpal and the roads around the Lac de Guiers being rehabilitated (with the support of the EU and MCA).
- (e) A modern agro processing facility –“Agropole” - constructed in 2007. It has classification chains already in place for onions, sweet potato and melon, storage and cold-chain chambers, packaging facilities, as well as a slaughterhouse. The facility has been poorly utilized because it was disconnected from the main production areas (an issue which will be addressed by the project).
- (f) Highest number of protected areas in the Saint Louis and Louga regions. Project intervention area benefits from 15,356 hectares of classified forests and reserves, which

³² Four rural communities in Department Dagana in Saint Louis Region: Ngnith, Diama, Ronkh., Mbane. Three rural communities in Department Saint Louis in Saint Louis Region: Fass Ngom, Ndiebene Gandiole, Gandon and two rural communities in Department of Louga in Louga Region: Keur Momar Sarr and Syer.

sustain local population through forest product gathering, hunting and fodders and which generate revenues from tourism. The project will intervene in nine sites: the Classified Forests of Rao, Keur Mbaye, Mpal, Maka Diama, Naere, Ndiaw, and Thilene, the Sylvo Pastoral Reserve of Mpal Merinaghen, the Fauna Reserve of Ndiael,

8. The project will finance technical assistance to key institutions (rural communities in particular) and the private sector (in particular smallholders engaged in commercial agriculture) as well as investments in critical irrigation infrastructure. This will enable the sustainable and inclusive exploitation of 10,000 ha of irrigated land in the Ngalam Valley and around the Lac de Guiers (St Louis and Louga regions). The project will leverage and complement the Bank-financed PDMAS and the ongoing MCA-funded project, which are developing 2,500 hectares in the Middle Valley and 3,000 hectares in the Ngalam Valley. The final choice of the specific locations will be determined based on land made available by rural communities, investor demands and eligibility criteria.

9. The project will help put in place the conditions necessary to attract responsible private investors in the community-led development of agri-business in a way that promotes inclusive participation of smallholders and SMEs through local sourcing, contract farming or any other relevant scheme. The aim being to leverage to the maximum strategic private investors with respect to their access to high value markets, technology, skills and financing capacity. It is expected that the project will leverage more than US\$100 million of private investment from large operators. It will also help reduce land degradation, increase carbon sequestration³³ and protect the environment.

10. The project's approach is based on a transparent and participatory land and water allocation process led by informed and equipped rural communities. The Principles for Responsible Agricultural Investment (RAI) as well as the United Nations Voluntary Guidelines on Governance of Land Tenure (UNVGGLT) will be applied to leverage smallholders/large-scale-growers participation and ensure fair and sustainable outcomes. These principles and guidelines will be complemented by SLWM principles and become applicable for large investors as well as for medium and smallholder farmers to reduce land degradation and GHG emissions.

11. The project's design allows for flexibility in the number and size of the sites, whereby each site will be adapted to the level of community participation and the scheme's attractiveness to the private sector. For example, the rural community of Gnith (left bank of the Lac de Guiers) has indicated that it has 2,000 hectares available in six lots ranging from 100 to 800 hectares and capable of accommodating a mixture of large, medium and small investors – including smallholders regrouped within associations. Part of the 10,000 irrigated hectares established by the project will benefit smallholders and SMEs with the remaining portion being developed by larger investors. Actual ratio of land used and investment plans will be agreed upon by the rural community as a pre-requisite to the investment.

³³ According to FAO (World Soil Resources Report 102, 2004), irrigation is recommended to increase the amount of carbon in soil in drylands. In small-scale irrigation systems, a high potential for carbon sequestration arises from supply of water that allows high primary productivity from slow decay of soil carbon as well as from extensive use of manure.

Project Components

Component 1: Support to sector actors (GEF: US\$2.5 million; IDA: US\$8.5 million)

12. This component consists of support to nine rural communities³⁴ in Northern Senegal (Saint Louis and Louga regions) through technical assistance to ensure that land users rights are allocated to private operators in an inclusive and sustainable way benefiting the broader community. It also consists in the provision of vocational training and applied research to farmer associations, SMEs and agriculture business associations. Technical assistance will be provided to support local communities in negotiating SLWM-friendly agribusiness contracts and to promote adoption of SLWM practices by farmers, including demonstration areas. Finally, it includes support to the rehabilitation of the Agropole and the land management process.

Sub-Component 1.1: Improved Rural Communities and Small-Scale Farmers' Capacity (GEF: US\$2.5 million; IDA: US\$4.5 million)

13. The objective of this sub-component is to develop around 10,000 hectares of irrigated perimeters based on win-win partnerships between rural communities (RCs) and agribusinesses. The latter will be designated through an inclusive, transparent and competitive process using RAI criteria and UNVGGLT guidelines. When in contract farming (a model that is strongly supported by the project) with SME, agribusinesses will facilitate access to market, access to technology and access to finance for SME. It is expected that agribusiness will contribute annually to the RC's budget. The technical assistance will support local communities in negotiating SLWM friendly agribusiness contracts so as to ensure long term sustainability. The technical assistance will also promote adoption of SLWM practices by farmers, including demonstration areas. The development of a community-led agribusiness approach is core to the project as it is expected to maximize local economic, social and environmental benefits for the communities. According to FAO³⁵, the conversion of drylands to irrigated agriculture will result in increased land potential for carbon sequestration. In small-scale irrigation systems, a high potential for carbon sequestration arises from the supply of water that allows high primary productivity, from slow decay of soil C, much of which is bound closely to clay particles, as well as from extensive use of manure, both from animal and crop residues.

Technical assistance for rural communities

14. The project will support the process of identifying and allocating 10,000 hectares of land, which is to be negotiated between investors, rural communities, and local rights holders. This process is detailed in Annex 6.

15. The criteria that would guide the land identification process by the rural communities will be the following: the land availability (following consultations with the rights holders), the agronomic potential, the costs of creating these irrigated perimeters (in particular in regard to

³⁴ Four rural communities in Department Dagana in Saint Louis Region: Ngnith, Diama, Ronkh., Mbane. Three rural communities in Department Saint Louis in Saint Louis Region: Fass Ngom, Ndiebene Gandiole, Gandon and two rural communities in Department of Louga in Louga Region: Keur Momar Sarr and Syer.

³⁵ FAO World Soil Resources Report 102, 2004 Carbon Sequestration in dryland soil

their distance to water, to roads and to the electricity grid), the capacity of the local population to work effectively with the designated agribusinesses, environmental risks and the risk of land degradation. Based on the results of the land identification process, the project will assist the rural communities in developing a blueprint for the project area, which will constitute the basis of the bidding process for agribusinesses while main land degradation risks will be identified for these areas.

16. The project will then assist rural communities in selecting the best agro-industries and negotiating with them a contract that will specify the mutual obligations on which all parties must agree. The selection will be made during village committee meetings convened by village leaders. Particular attention will be given to formalizing terms on sustainable land and water management (source of productivity gains in the long run), as well as to creating economic and social benefits for rights holders and communities, which could include: building productive infrastructure for local rights holders through a lease fee to support Local Development Plans; recruiting local labor; providing technical training; contract farming with PMP. The project will support the rural communities in following-up the implementation of these contracts and will provide technical and legal assistance in the event of a dispute.

17. A technical assistance program will be established to help rural communities throughout the process. The program will specifically : (i) assist local communities in identifying 10,000 hectares of land to be made available to private commercial agriculture producers, including small-scale producers (about 5,000 hectares in the Ngalam Valley and 5,000 hectares around Lac de Guiers); (ii) help carry out feasibility studies and elaborate master plans for the development of irrigated perimeters in the selected areas; (iii) assist rural communities in selecting private operators through a transparent and competitive process at village level; and (iv) assist rural communities in monitoring investors' activities to ensure fulfillment of their obligations as per the legally binding contracts that will be negotiated by the communities with private investors; and, (v) develop an effective dispute resolution mechanisms.

18. The project will assist the communities in the identification of parcels that they consider suitable for private investment. It will visit each of the concerned villages to ensure consultations at the village level have been undertaken. It will prepare written documentation to verify the effectiveness of the consultations at the village level, the geographical location of the parcels, their legal status, their current occupation and existing rights.

19. The project will help conduct an analysis of the land tenure background, and will assess the compatibility of each land offer with existing or ongoing land allocations and the POAS (*Land occupation and use mapping*). As land allocation for private investment may increase the pressure on common resources, the project will check that each targeted project area is in compliance with the POAS.

20. The project will support carrying out feasibility studies with multi-criteria evaluation, and activities to support land management capabilities of rural communities. This will include: (i) a multi-criteria evaluation of the land offers in economic (distance to water, roads, energy sources) and agriculture terms (soil potential, cultivation prospects), including models of irrigation systems in each parcel; (ii) a comprehensive land use rights inventory and a GPS survey of parcel boundaries; (iii) an indicative set of technical recommendations to guide future

development and a land allocation scheme between large investors, medium and small producers in each parcel; and (iv) a baseline measurement in order to have initial data and measure the expected effects on additional incomes for farmers, agricultural production (in quantity and value) and on new cultivated areas.

21. The project will help the rural community land management office monitor the agreement effectiveness and to facilitate obtaining various approvals and will ensure online publication of land allocation decisions by rural communities as a means to improve transparency and accountability.

22. The contractual agreement between the rural communities and the investors will spell-out the conditions of exit, either for failure of the investor to fulfil its obligations, bankruptcy or voluntary contract termination. The project will support a dispute resolution mechanism to help with the applications of these contractual clauses. The contractual agreement between the Rural Communities and the investors will include such mechanisms of dispute resolution to be agreed between the communities, local authorities and investors. This will also be reflected in the Project Administrative Procedures Manuel in a way that is satisfactory to the Bank. It will also be reflected in the Resettlement Policy Framework.

23. More broadly, and beyond the 10,000 hectares of irrigated perimeters discussed above, the project will provide rural communities with on-going legal and technical assistance, so as to improve their allocation and regulation procedures and to promote the adoption of sustainable land and water management practices on site. In line with the activities already carried out by the Support to rural communities Project (*Projet d'Appui aux Communautés rurales, PACR*) and MCA, this will enable the nine participating rural communities to move toward establishing an effective local office for land management that will put in place a database on the registered land use rights and the available land parcels. It will also improve the land allocation and regularization processes. It will include the training of RC staff, the implementation of a Land Information System based on images, and the provision of administrative and computer equipment to facilitate land management. Land management support activities will have to take into account changes in the legal framework expected during the course of the project, and work to support the implementation of these changes in the field.

24. Demonstration sites for SLWM and training will also be organized so as to support the wider possible adoption of SLWM practices. SLWM best fitted for the areas will be identified at early stage and will build on existing best practices collected in Senegal.³⁶

Strengthening Capacities of Small-scale farmers

25. This activity will also provide technical advisory services to small-scale farmers, through training, equipment and consultancy services, for the establishment of producers' associations and business partnerships with large investors as well as the adoption of sustainable land and water management practices such as windbreaks, cover crops, no-till or minimum tillage crops and water efficient irrigation techniques.

³⁶ Cf. Best Practices - Recueil d'expérience de gestion durable des terres au Sénégal - Projet « Land Degradation Assessment in drylands » (LADA), 2010

26. As is already the case in the project areas, supervision of small producers will be coordinated by the SAED. One specific area for capacity building will cover sustainable land and water management practices with the view to support adoption at local level by farmers. External consultants may be requested if the organizations involved do not have the necessary skills.

Summary of the Terms of Reference of the Technical Assistance for Component 1.1

Stage 1. Support for RCs in identifying areas for the irrigated perimeters, insuring that the identification process is transparent and inclusive. More generally, the technical assistance will provide support to the RCs to strengthen their capacities in land management as an extension of the PACR and MCA.

Stage 2. Development of technical studies, involving a development blueprint for the perimeters and surrounding areas and the identification of the main risks for land degradation. These technical dossiers will be the basis for the preparation of bidding documents by APIX.

Stage 3. Support for the RC in selecting and negotiating the best offers (through a technical support committee).

Stage 4. Proposals for the final development phase based on pre-investment studies for the SMEs within the perimeters and the SMEs outside the perimeters, taking into account the needs and contributions of selected investors. Agricultural techniques best suited for each agro-ecological area involved (including techniques for sustainable land and water management and agroforestry) will also be identified.

Stage 5. Support for the SAED in recruiting companies to be responsible for the work.

Stage 6. Insuring monitoring of all work and the delivery of equipment for preparing the perimeters and for the final development phase.

Stage 7. Developing a manual for the annual upkeep and management of equipment and infrastructure at perimeter level.

Stage 8. Monitoring and evaluation of the implementation of contracts between RCs and investors. Establishing an assistance service to help RCs deal with potential disputes with investors.

The work of this pilot technical assistance in the field will be relayed at national level by technical assistance in support of the land reform process.

27. The financial contribution of the project to the final development phase (that could also include financial support to buy input for the first harvest) will be put in place progressively. Eligibility criteria will be strict and will be oriented toward experienced farmers and/or those with a diploma in agriculture. The project will strongly encourage and support groups of producers in cooperatives or Economic Interest-based Groups (EIGs) (which enable farmers to pool financing capacities and risks), and in partnership with agro-industry (which provides access to markets, financing, and knowhow). In addition, because of economies of scale, forming cooperatives will facilitate the financing of the final development phase, enable learning, and reduce risk. Finally, cooperatives will encourage the participation of women and young people. Eligibility will also be based on pre-investment studies

Sub-Component 1.2: Improved Selected Key Stakeholders' Capacity (IDA: US\$3 million)

28. The objective of this sub-component is to support small- and medium-sized producers in exploiting the perimeter plots efficiently and sustainably (using SLWM practices), as well as in

developing SMEs that provide innovative services, thus enhancing the competitiveness of the value chains supported by the project.

Professional Training and Applied Research

29. Professional training and applied research will be coordinated by the UGB (Gaston Berger University), which will work with the relevant organizations (ISRA, CFPH, etc.) and cover the following areas: new seeds, sustainable land and water management techniques; new techniques for the conservation of agricultural products; new irrigation techniques; farm management (including accounting and financial management); crop management; and any other training that might contribute to improving agricultural value chains in the project areas.

Strengthening Capacities of Organizations Supporting Agricultural Value Chains

30. These funds will help to structure and formalize joint-trade organizations for products with the greatest potential. These joint-trade organizations will play an especially significant role in coordinating commercialization and marketing. The project will also finance studies to evaluate the potential of and develop conditions for new products with high added value including in niche markets such as organic and fair trade including small pilots.

Support to APIX

31. Senegal's attractiveness and availability of land to be developed will be widely advertised. A proactive approach will be undertaken for potential strategic investors including domestic investors (SMEs specialized in horticulture in the Niayes, importers listed by APIX) and international investors, including those who have experience with horticulture in Africa

32. APIX will be responsible for this activity. The agency has been involved in promoting private investment in agribusiness in Senegal over the last decade. It has successfully attracted, facilitated and monitored private operators investments in the region over the years. APIX mandate under this project is to proactively promote investment opportunities locally and internationally. It is expected that this project will be of much more interest for private investors because of Senegal's geographic location relative to European markets and its access to ports and road infrastructure to the capital city of Dakar.

33. The project will help APIX in identifying reference agribusinesses from Senegal or from foreign countries (e.g. South Africa, Brazil, Morocco, Israel, United-Kingdom, France...) and in raising awareness about Senegal among the investors that may be interested in the identified perimeters.

34. Drawing lessons from other Bank-funded projects, the proposed project will support APIX in the organization of investment fairs and events to attract private investors and their contributions to the project.

35. The project will then assist APIX in the preparation of investment promotion documents for the irrigated perimeters identified in accordance with the Land Framework, and preparation of a framework partnership agreement ("*cahier des charges*") between rural communities and investors. They will include a presentation of the strengths of Senegal in horticulture, a

presentation of Lake Guiers and Ngalam area, an overview of successful agribusiness implementations in this region and a technical description of the lands to be allocated with their location. This package will also present the incentives provided by the project in terms of basic infrastructure and matching grants.

36. A framework partnership agreement between rural communities and investors will be prepared by APIX to allow investors a first assessment of the expected level of responsibilities. This framework agreement will be negotiated with the rural community and will include key points on which both parts will be brought to agree, in accordance with social and environmental standards in force. These include (but will not be limited to) the objective of the contract, contract duration and termination provisions, benefit sharing and other social and environmental obligations of the investor, responsibilities of the rural community, and dispute resolution mechanisms

37. Project selection will be the responsibility of the rural communities supported by the Technical Committee and the technical assistance firm. The selection of the agribusinesses would be made on the basis of the following variables: long-term sustainability of the project, impact of the project on the Senegalese economy, impact on local population (in terms of jobs creation, access to irrigated land, possibility of contract farming with the SME, financial contribution to the local development budget), control of environmental impacts, and financial contribution to the creation of the irrigated perimeters. RAI criteria and UNVGGLT guidelines will inform other selection principles. These criteria will be included in the PIM.

38. During this phase, field trips will also be organized to visit offered parcels as well as rural communities and agribusiness companies that have already established investments.

Rehabilitation of the Agropole

39. This activity will also support the rehabilitation of the Agropole, a modern agro processing facility constructed in 2007 near Mpal. Although it is equipped with classification chains for fruits and vegetables, storage and cold-chain chambers, packaging facilities, as well as a slaughterhouse, the Agropole has been poorly utilized and some rehabilitation works are currently needed.

40. A public-private partnership assessment is currently being conducted jointly with IFC in order to identify feasible options for private sector involvement with a mandate to provide quality services to SMEs and smallholders.

Sub-Component 1.3.: Support to the land management process (IDA: US\$1 million)

41. Through the provision of technical advisory services, the project will support a review of the policy, legal and institutional frameworks governing the use and allocation of rural land as it relates to agribusiness investment. This would include (i) reviewing relevant laws and practices in light of the findings of the Land Governance Assessment Framework, international best practice guidelines including the Voluntary Guidelines on the Governance of Land Tenure and the Project's Land Framework; (ii) assessing capacity strengths and weaknesses at all levels of government and within Rural Communities; (iii) compiling and distilling lessons learned within Senegal and elsewhere from actual ongoing, proposed or failed investments; (iv) identifying

reforms that may be needed in laws, institutions and practices to address identified constraints and weaknesses; (v) developing specific instruments -- such as model leases, platforms for the transparent public display of information concerning investments, local level land administration and mapping tools, etc.

42. This component will provide technical assistance to the National Commission for Land Reform, as well as relevant public institutions and civil society organizations, including the General Directorate of Taxes and Domains (DGID).

43. Within participating Rural Communities, the project will also support the updated mapping of agricultural land, the preparation of a cadastral plan showing the allocation of land rights to investors and community members, and the design and implementation of a mechanism by which information concerning investments are made public.

Component 2 – Development of irrigation infrastructure and sustainable natural resources management (GEF: US\$3 million; IDA: US\$65.5 million)

Sub-Component 2.1: Irrigation infrastructure and water resources management in the project areas (IDA: US\$61.5 million)

Primary irrigation infrastructure for water delivery to the Ngalam valley

44. This component aims to improve the availability of water in Ngalam valley for the agricultural requirements of an area of some 8,000 hectares (3,000 hectares identified by the MCA and about 5,000 hectares by PDIDAS), corresponding to an output of about 16 m³/s. Work financed by the MCA will increase output to Ngalam from 3 m³/s to 8 m³/s out of season, with capacity from the Ndiawdoune bridge work of 12 m³/s. This will irrigate around 3,000 hectares in the area. A consultant was hired by the project at the end of August 2012 to prepare a pre-feasibility study setting out the various options for delivering water to Ngalam. The consultant's report was submitted in February 2013. The consultant conducted a multi-criteria analysis to compare up to a maximum of four selected options. Two best options have already been identified: (i) the Diama Canal and (ii) expansion of the compensatory canal on the right bank, which is to be established by the MCA. The consultant took into account current studies on the area, including short and medium term actions planned by the government and other donors such as the MCA. To insure effective consultation, the consultant's methodological guidance report was shared with all those involved, especially SAED, OLAG, and the World Bank. The procurement plan for the Project Preparation Fund has been updated to include financing for the first phase of preliminary design reviews and tender document study on the delivery of water to Ngalam. This will enable the selection procedure for the consultant (DMI and DP) to be started before December 2013.

Development of secondary and tertiary irrigation infrastructure

45. The project will contribute to the design, construction and equipment of secondary irrigation canals for 10,000 hectares of irrigated perimeters (US\$19.5 million) in the Ngalam valley and the Lac de Guiers area. It will also support the design, construction and equipment of tertiary irrigation schemes for local small-scale farmers in the perimeters (US\$14 million) in the Ngalam valley and the Lac de Guiers area. Small holders will also be provided with technology

packages, including improved seeds. SAED will be responsible for the implementation of irrigated schemes. This will include the preparation of tender documents for consultants' services for the design of secondary and tertiary irrigation schemes and bidding documents for the procurement of related works and goods.

46. Access roads to and within the project areas will be rehabilitated/constructed, as well as secondary works such as fences, storage facilities and extension and expansion of electricity connections(US\$2 million). The actual locations of these investments will be determined based on actual needs of rural communities and investors demand.

47. SAED will be responsible for the implementation of these activities. This will include the preparation of tender documents for consultants' services for the design of primary, secondary and tertiary irrigation structures and bidding documents for the procurement of all related works and goods. Physical investments will be implemented after appropriate capacity building of rural communities. The sequencing of project activities is described in paragraphs 80-83

Technical Assistance to SAED/OLAG to Improve Water Resources Management

48. This activity will include an environmental audit of the area, as well as technical assistance to improve integrated water resources management for the whole region, the Lac de Guiers and the Ngalam being both part of the same sub-catchment. It will include major actors such as OLAG and SAED.

Sub-Component 2.2: Matching Grants (IDA US\$4 million)

49. Financing will be available for SMEs and farmers associations through matching grants up to 80 percent of the costs of sub-projects to improve their productive capacity, competitiveness and develop linkages with larger firms operating in the project. A capped amount of financing (US\$200, 000 per perimeter) will be provided for tertiary irrigation infrastructure, business development services and training in areas such as development of business plans, financial statements, marketing and product design. The project will have eligibility criteria based on experience, detailed feasibility studies and agreement on environmentally sound practice. It will strongly encourage and support contract farming arrangements between the large investors and smallholder groupings with inclusion of SLWM practices wherever possible. The eligibility criteria will be set out in the PIM.

Sub-Component 2.3: Sustainable Management of Classified Forests and Natural Reserves (GEF: US\$3 million)

50. The aim of activities to be implemented by the National Agency for the Great Green Wall (ANGMV) in interaction with the Regional Inspection of Water and Forests and the Regional Division of Environment and Classified Establishment is the sustainable management of nine identified classified forests, natural reserves, and common forests in and around the communities that are to benefit from the project's hydro-agricultural developments. Thus, the project promotes an inclusive landscape management approach supporting interlinked sustainable natural resource uses. Local community members use available but decreasing natural resources in these forests and reserves for firewood, fodder and construction material. Further, if successful, the project is likely to attract more immigrants in the area, which will likely result in an increased pressure on

surrounding natural resources. The benefits of the activities supported will include increased carbon sequestration and conservation of key forest ecosystem services.

51. After a participatory diagnostic process involving the rural communities, a management plan for selected forests and reserves will be drawn up, which will set out appropriate actions for the sustainable management of these areas. The diagnostic and management plans will ensure prioritization of GHG mitigation activities. Activities, to be managed jointly by user groups and water and forestry services, will include: demarcation and mapping of forest and reserve boundaries; communication campaigns (radio, brochures, etc.) laying out principles that govern the use of forests; selective natural regeneration (identification and protection of key plants); construction and maintenance of a firebreak trails, which can also be used as a basic communication channel; and support for a supervisory committee.

Component 3 – Project Coordination, Management, Communication, Monitoring and Evaluation (GEF: US\$0.5 million; IDA: US\$6 million)

Sub-Component 3.1: Coordination and Project Management (IDA: US\$3.5 million)

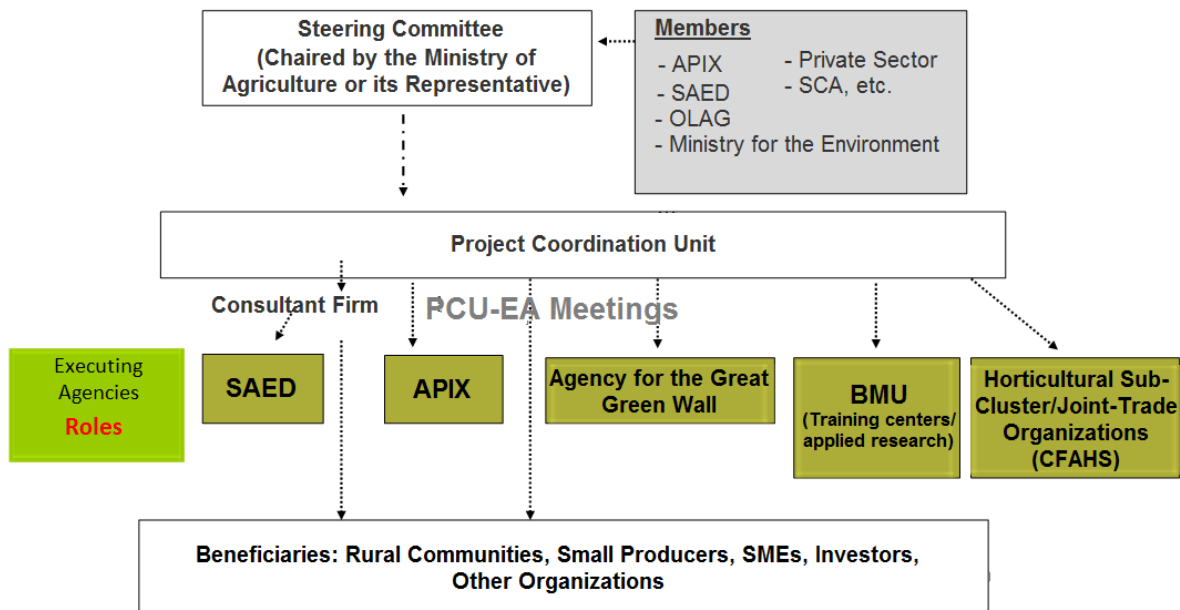
52. The project's management structure will have three levels: the Project Steering Committee (PSC), the Project Coordination Unit (PCU), and the Technical implementing agencies. The project's steering, coordination, implementation, monitoring, and evaluation procedures will be specified in the PIM, which will detail each authority's role and responsibilities for the project. The PIM will be prepared within three months of project effectiveness

53. The PCU will have fiduciary independence and, given the SAED's strategic implementation role, will, if possible, be based in the SAED building in Saint-Louis. PCU staff will be recruited in a competitive process. The Ministry of Agriculture's Procurement Unit will bear responsibility for appointing the recruitment agency that will hire PCU staff. The recruitment of key PCU personnel (including the coordinator and financial management expert) is an effectiveness condition.

54. There are five technical implementing agencies:

- SAED will be the implementing agency for the primary, secondary and tertiary irrigation infrastructure, rural roads, parcel electrification and capacity building of small producers (Sub-components 1.1 and 2.1);
- APIX will be the implementing agency for activities related to investment promotion and investor aftercare with the support of the project. They will carry out international tenders based on the feasibility studies and masters plans developed under Sub-component 1.1;
- The National Agency for the Great Green Wall (ANGMV) of the Ministry of Environment will implement Component 2.3.
- The SCA, through its horticulture cluster would be the implementing agency for activities related to the strengthening of horticulture inter-professions (sub-component 1.2);
- The Gaston Berger University (UGB) will be the implementing agency for activities related to vocational training and applied research (Sub-component 1.2).

55. The diagram below shows the project’s implementation mechanism (see Annex 3 for more details).



Sub-Component 3.2: Impact Monitoring and Evaluation (GEF: US\$0.5 million; IDA: US\$1.5 million)

56. The project has a strong focus on monitoring and evaluation and a range of instruments and approaches will be put in place.

57. The project will provide technical assistance to the institutions which will implement the monitoring arrangements for the project: the Directorate for Analysis and Prediction of Agricultural Statistics (DAPSA) and the Directorate of Horticulture of the Ministry of Agriculture as well as the Ministry in charge of environment.

58. Results-orientated M&E is the responsibility of the PCU. This will ensure effective and timely monitoring of progress towards achieving the development objective as set out in the Results Framework in Annex 1 and in the Tracking Tools of the GEF for Land Degradation, Climate Change Mitigation and Sustainable Forest Management. Data will feed into the implementation support missions. The project will build on existing M&E capacity (SAED, Ministry of Agriculture and Ministry in charge of environment). The project will rely as far as possible on existing monitoring structures. The SAED has two monitoring and evaluation tools: i) a database relying on several delegations (CPSE – Head of Monitoring and Evaluation Programming) and agricultural consultants; ii) remote sensing tools (used every two years), which check on the productivity of fields and changes in crops. SAED’s monitoring and evaluation system must be bolstered to meet the needs of the project. SAED will be able to rely on other institutions, such as the UGB (Land Observation), the DPV (*Direction de la Protection des Végétaux*), and the Autonomous Port of Dakar. The DAPSA and the Department of Horticulture (at the Ministry of Agriculture) will also be strengthened, particularly so that they

can analyze in greater detail certain agricultural value chains that are vital to the project. To obtain data relating to production and commercialization of perimeter farmers, one person per perimeter (pre-selected by the consultant team according to particular criteria) will be designated by the RC and/or village to support the other farmers in quantifying and recording their production, commercialized output, sales price, and income. This person will be paid for the service and will also receive a bonus if the rural advisor determines that the reported results are correct.

59. The ANGMV will work with relevant departments of the Ministry of environment, particularly the Department of Environment and Classified Establishments, to insure the monitoring and evaluation of environmental indicators, including on annual basis: the areas in which sustainable land management practices have been adopted; carbon stored in forest ecosystems and emissions avoided from deforestation and forest degradation; and the areas benefiting from a forest management plan. The GEF's monitoring tools for land degradation, sustainable forest management, and climate change mitigation (more than a hundred indicators) will be measured three times in the course of the project: the start, mid-point, and end point of the project. The PCU and ANGMV will seek an arrangement with the new SAWAP BRICKS initiative to strengthen M&E efforts especially for mapping, GIS modeling and carbon monitoring

60. Impact evaluation: The project will conduct two levels of evaluation: (i) in order to account for the change brought about by the project, a rigorous impact evaluation of the overall project will be conducted; (ii) a specific impact evaluation to shed light on opened research questions. Beneficiaries will be compared with a carefully constructed comparison group within the growth pole and then compare this same group with a carefully constructed comparison group outside the growth pole. In doing so, the evaluation would test the existence of spillovers.

61. Finally, environmental outcomes will be monitored through a set of specific indicators included in the GEF tracking tools for Land Degradation (LD), Climate Change (CC) and Sustainable Forest Management (SFM). Support from BRICKS is expected to supplement monitoring efforts especially for training of project stakeholders, mapping, GIS modeling and carbon monitoring.³⁷ It should be acknowledged that only a few countries avail of a monitoring network that covers tons of CO₂ equivalent avoided at site level and Senegal is no exception. This project will build capacity in order for Senegal to improve such monitoring capacity.

Sub-Component 3.3: Communication (IDA: US\$1 million)

62. The project will support continuous communication and consultation with the local population as well as the documentation and communication of lessons learned so as to facilitate the replication of successful solutions in other regions and countries. A communication strategy will be prepared and implemented in order to create the right conditions for the effective implementation and scaling-up of the sustainable and inclusive model as envisaged by this project.

³⁷ The regional GEF-FAO-UNEP LADA project carried out a national study in Senegal to describe LD. However, except for the area, all other data was given in qualitative terms (February 2010).

63. A comprehensive and well-planned communication intervention is critical for achieving the objectives of the project as it relies on an open, inclusive, and participatory approach. More importantly it aims at engaging rural communities at the level of village representatives to express their interests throughout the planning and implementation process. Strategic application of communication tools and techniques will foster effective implementation of the project components and specifically: (i) ensure transparency in land allocation procedures (Subcomponent 1.1); (ii) promote a policy dialogue on land issues (Subcomponent 1.3); and (iii) support the development and implementation of forest conservation and management plan (Subcomponent 2.3).

64. To ensure stakeholder engagement at the local levels and support the successful implementation of the project, a fully-fledged communication and outreach strategy towards rural communities and broad project stakeholders will be developed in order to: i) inform stakeholders about project objectives, modalities, and benefits; and ii) disseminate best practices and lessons learned for the purposes of replicating the sustainable and inclusive approach of the project.

65. To this end, a three tiered communication strategy will have the following objectives:

- at local level - ensure that future public and private investments yield the greatest possible benefits to be shared across all members of the Rural Communities, including women and young people;
- at national level - share lessons learned and best practices so as to facilitate the replication of successful solutions in other regions as well as promote an informed debate on land issues;
- at international/regional level - proactively engage with relevant NGOs by sharing project's results and best practices in establishing mutual benefitting partnerships between Rural Communities and agribusiness investors to prevent criticisms of favoring land grabbing and differentiate this from other controversial initiatives around project areas.

66. The communication program will employ the span of available formal and informal channels and will be managed by a communication specialist within the Project Coordination Unit that will drive the communication process.

67. As part of Component 3, IDA resources (US\$0.5 million) financed project preparation activities including: Review of the legal framework for land; support to land identification by rural communities and needs assessment; prefeasibility study for the primary irrigation infrastructure; Environmental and Social Assessment Framework; Pest Management Plan; and Resettlement Policy Framework.

Annex 3: Implementation Arrangements

REPUBLIC OF SENEGAL: Sustainable and Inclusive Agribusiness Development Project

I. Project Institutional and Implementation Arrangements

1. Implementation arrangements feature several players whose roles will be further detailed in the Project Implementation Manual. These arrangements take into consideration capacity limitations in Government and build on similar successful projects in Senegal. The Project will be implemented by a Project Coordination Unit, designated focal points in each of beneficiary ministries and institutions under the supervision of a steering committee, presided by the Ministry of Agriculture.

2. By having implementation responsibility in the hands of designated persons in the beneficiary agencies, it is expected that this will result in more ownership of the project at the local level and sustainable results at the end of the project.

Project administration mechanisms

3. The project's management structure will be articulated around three bodies: the Project Steering Committee (PSC), the Project Coordination Unit (PCU), and technical implementing agencies. The project coordination, management, implementation, monitoring and evaluation procedures will be detailed in the Project Implementation Manual (PIM), which clarify each authority's role and responsibility.

4. Strategic oversight of the project will be provided by the PSC. This Committee will be chaired by the Minister of Agriculture and rural Equipment or his representative and include Ministers or representatives of the Ministry of Economy and Finance, Ministry of Infrastructure; Ministry of Investment Promotion and Partnerships; Ministry of Environment and Sustainable Development; Ministry of Hydraulics and Sanitation; Ministry of Justice, Ministry of Territorial Planning and Local Collectivities, rural communities of the Ngalam Valley and Lac de Guiers areas in St Louis and Louga Regions, the irrigation development agency-SAED; Office du Lac de Guiers (OLAG) ; Organisation pour la Mise en Valeur du Fleuve Sénégal – OMVS; the Private Investment Promotion Agency – APIX; Secretariat of SCA, representatives of the Civil Society and private institutions.

5. The PSC will meet on a quarterly basis and will be responsible for approving the annual work plans and budgets and providing policy direction. The PCU will act as the Secretariat of the Project Steering Committee (including preparing the meetings, elaborating the documents for the meeting, recording the minutes of the meeting, etc.).

6. The Project will be managed on a day-to-day basis by a PCU. The need for a strong multi-sector coordination coupled with identified substantial risks associated with the project requires an empowered, dedicated, decentralized, multi-sectoral team of experts that is currently not provided in the current configuration of the public sector in Senegal. The PCU will be an independent entity. The PCU staff will be competitively recruited and dedicated to project activities. It will be responsible for all fiduciary aspects of the project including procurement,

disbursement, accounting, financial reporting and monitoring and evaluation of the project, and for ensuring the auditing of project accounts. The PCU will be composed of the following staff: (i) a coordinator; (ii) two procurement specialists; (iii) a financial management specialist; (iv) an accountant; (v) a communication specialist; (vi) a SLWM and environmental safeguard specialist and (viii) a social safeguard and community development specialist. Additional staff with specific expertise may also be recruited. The PCU will prepare quarterly and annual reports recording the progress of the project.

7. Project implementation support will be carried out twice a year and a mid-term review will take place in 2017 with the objective of assessing progress to date and if necessary to re-direct the project by integrating additional lessons learned and realities on the ground. All project accounts will be audited annually by independent auditors acceptable to IDA and will be submitted to IDA no later than six months after the closing of the fiscal year in Senegal.

8. The PCU will coordinate and consolidate the annual work plans and budgets and oversee the financial management and procurement of all other technical implementing agencies. It will be located in St Louis.

9. Management and implementation of individual project components/project subcomponents will be mainstreamed to selected technical implementing agencies involved in the project through designated focal points who will work closely with the PCU.

Implementation of project components

10. Technical implementing agencies will be responsible for the execution of specific project activities, as defined in the work plans. Funding for the operational costs associated with this function will be provided under the project. In light of capacity constraints, these agencies will also be beneficiaries of capacity building efforts by the project. Agreements between the PCU and each implementing agency will be prepared within four months of project effectiveness. The Technical implementing agencies under the project are:

- SAED will be the implementing agency for the primary, secondary and tertiary irrigation infrastructure, rural roads, parcel electrification and capacity building of small producers (Sub-components 1.1 and 2.1);
- APIX will be the implementing agency for activities related to investment promotion and investor aftercare with the support of the project. They will carry out international tenders based on the feasibility studies and masters plans developed under Sub-component 1.1;
- The National Great Green Wall Agency of the Ministry of Environment will implement Component 2.3.

11. The PCU is directly responsible for the implementation of the whole project.

12. **Focal Points.** To ensure coordination between the PCU and technical implementing agencies, each will designate a focal point. The appointment of such focal points will be done within four months of project effectiveness, as part of the agreements between the PCU and technical implementing agencies. The role and responsibility of the focal point will be clearly detailed in the PIM and their respective terms of references. They will work in close

collaboration with the PCU. The project will strengthen the capacity of the focal point through technical assistance and equipment. Civil servant focal points would be compensated on the Government counterpart fund based on existing government compensation framework.

13. After the investors have been selected and their financial contribution to the perimeters has been determined, the project will assist SAED in realizing and/or supervising the implementation of irrigated schemes. When the investors are financing the complete establishment of the perimeters, the role of SAED will be restricted solely to supervision. The role of SAED will also include the preparation of the bid documents and a follow-up of the ongoing work especially for the pieces that will be partly or entirely financed by the project.

14. In order to ensure that the technical assistance provided to the communities is genuinely independent and free of conflict of interest, there will be contractual arrangements between the communities and the consulting firms recruited by the project coordination unit. The contractual arrangements between the consulting firms and the project will reflect payments conditional of services provision that are found satisfactory to and by the communities

15. A grievance handling and dispute resolution mechanism will be established to help with the applications of contractual clauses between the rural communities and the investors. The contractual agreement between the Rural Communities and the investors will include such mechanisms of dispute resolution to be agreed between the communities, local authorities and investors. It will be described in the Project implementation Manual.

16. The Project Implementation Manual (PIM), including a Project Implementation Plan will be finalized within three months of project effectiveness. The PIM will include all activities sequencing, periodic reporting, monitoring and evaluation arrangements throughout the life of the project. It will also include a grievance handling and dispute resolution mechanism to help with the applications of contractual clauses between the rural communities and the investors. The contractual agreement between the Rural Communities and the investors will include such mechanisms of dispute resolution to be agreed between the communities, local authorities and investors. A model lease contract between the State and the communities as well as a model sub-lease contract between communities and the operators will be included in the project implementation manual The PIM will further include SLWM, SFM and carbon benefit measurement guidelines and criteria.

II. Financial Management, Disbursements and Procurement

A. Financial Management Arrangements

17. A financial management assessment of the Project was carried out in accordance with the Financial Management Manual for World Bank-Financed Investment Operations that became effective on March 1, 2010. This assessment was part of the preparation phase of the Project.

18. The objective of the Financial Management Assessment is to determine whether the PCU of the Agribusiness Development Project under the oversight of the Ministry of Agriculture has acceptable financial management arrangements in place to take on the project's fiduciary responsibility. These arrangements include accounting system and reporting, auditing, and

internal controls. The financial management arrangements of the PCU are acceptable if the FM system: (i) is capable of recording correctly all transactions and activities; (ii) supports the preparation of regular and reliable financial statements; (iii) safeguards its assets, and (iv) is subjected to a satisfactory auditing process.

Budgeting arrangements

19. The Administrative, Financial and Accounting manual of procedures will describe in detail the budget process including preparation, elaboration, approbation, and execution monitoring phases.

20. The budget will be adopted by the PSC, before the beginning of the year and its execution will be monitored on a quarterly basis. Annual draft budgets will be submitted to the Bank's non-objection before adoption and implementation.

Accounting policies and procedures

21. The current accounting standards in use in Senegal for on-going Bank-financed projects will be applicable. SYSCOHADA is the assigned accounting system in West African Francophone countries. The credit will be accounted for by the project on an accrual basis. This will be documented with appropriate records and procedures to track commitments and to safeguard assets. Accounting records will be maintained in local currency. The chart of accounts will facilitate the preparation of relevant quarterly and financial statements including information on the total project expenditures, the financial contribution from IDA and other donors, and expenditure by component and category.

22. Annual financial statements will be prepared in accordance with SYSCOHADA accounting system.

Financial Reporting and Monitoring

23. The PCU will be responsible for overall reporting on the project.

Interim financial reporting

24. Interim Un-audited Financial Reports (IFRs) would be prepared on a quarterly basis.

25. The IFRs will include sources and uses of funds by project expenditures classification. It will also include a comparison of budgeted and actual project expenditures (commitment and disbursement) to date and for the quarter. The PCU will submit the IFRs to the Bank within 45 days following the end the calendar quarter. The first IFR shall be furnished to the World Bank no later than 45 days from the end of the first calendar quarter after the effective date, and shall cover the period from the incurrence of the first expenditure under the project, through the end of the first calendar quarter.

26. The format and contents of the IFR has been agreed upon.

Annual Financial Statements

27. The PCU will produce Project Annual Financial Statements, and these statements will comply with SYSCOHADA accounting system and World Bank requirements. These Financial Statements³⁸ will consist of:

- A Statement of Sources and Uses of Funds,
- A Statement of Commitments,
- Accounting Policies Adopted and Explanatory Notes,
- A Management Assertion that project funds have been expended for the intended purposes as specified in the relevant financing agreements.

Internal control and internal audit arrangements

Internal control system and Internal audit

28. The internal controls will be organized through the Administrative, Financial and Accounting procedures manual with appropriate segregation of duties and responsibilities.

29. A consultant will be recruited to perform quarterly ex-post internal audits. An annual internal audit planning will be sent to IDA every year. The report of each internal audit mission will be sent to IDA.

30. At the national level, the Directorate of Investment of the Ministry of Economy and Finance controls ex ante all expenditures and withdrawal applications before sending them to the Bank.

Funds Flow and Disbursement Arrangements

Disbursement Methods

31. The project will use the transaction-based disbursement procedures, i.e., replenishment, direct payment, reimbursement, and special commitments (see Figure below).

Minimum Value of Applications

32. The minimum value of applications for reimbursement, direct payment and special commitment is 20 percent of outstanding advance made to the designated account.

Designated Account

33. A designated account will be opened and managed by the PCU.

34. The designated account will be held in CFA Francs and located in a commercial Bank acceptable to IDA. The designated account ceiling will be indicated in the disbursement letter once it has been agreed upon during negotiations.

³⁸ It should be noted that the project financial statements should be all-inclusive and cover all sources and uses of funds and not only those provided through IDA and GEF funding. It thus reflects all program activities, financing, and expenditures, including funds from other development partners.

Monthly replenishment applications

35. The designated account will be replenished through the submission of withdrawal applications on a monthly basis by the PCU and will include reconciled bank statements and other documents as may be required. All supporting documentation will be retained at the PCU and must be made available for periodic review by Bank’ missions and external auditors.

Audit arrangements

36. The Financial Agreement will require the submission of Audited Financial Statements for the Project to IDA within six (6) months after year-end including the management letters.

37. An external auditor with qualification and experience satisfactory to the World Bank will be appointed to conduct an annual audit of the project’s financial statements. A single opinion on the Audited Project Financial Statements in compliance with International Standards on Auditing (ISA) will be required.

38. The external auditor will prepare a Management Letter giving observations and comments, and providing recommendations for improvements in accounting records, systems, controls and compliance with financial covenants in the Financial Agreement.

39. The table below summarizes the auditing requirements:

Audit report	Due Date
<ul style="list-style-type: none">▪ Financial Statements▪ Management letter	End of June

Financial management risks and mitigation measures

Description of Risk	Risk rating	Risk Mitigation Measures incorporated in Project Implementation	Condition of Effectiveness (Yes/No)	Residual Risk/ (Risk) rating
INHERENT RISKS				
Country Level				
PFM system is weakened by (i) extra-budgetary operations; (ii) weak oversight of public sector entities/agencies; (iii) difficulties in the interfacing between or integrating the various financial management information systems, i.e. Revenues (GAINDE for Customs, SIGTAS for Tax), Expenditures (SGFIP), and Accounting (ASTER).	S	Remedial measures are being taken to address the weaknesses of the budget execution procedures. The law on the autonomous agencies adopted in 2009 triggered several initiatives to improve the financial oversight and transparency of the agencies. A TA operation is being implemented to address the key weaknesses related to the budget and accounting systems and the internal and external controls.	No	S
Entity Level				
Mismanagement of project assets and deviations in the use of funds. Coordination issues due to the involvement of diverse groups of stakeholders and several technical implementing agencies.	S	A new stand-alone Project Coordination Unit will have the overall FM responsibility on the project. A Project Steering Committee., chaired by the Minister of Agriculture and Rural Equipment or his representative and including stakeholders (Technical ministries, SAED FOS, OMVS, ANCAR, Research institutions, ANREVA, APROSI, etc.) will be set up.	No	M
Project Level				
The project team (PCU and technical implementing agencies) may not be experienced in IDA financial management and disbursement procedures.	S	An Administrative and Accounting Manual of procedures (AMP) will be developed and training will be provided to the project team to ensure correct application of the IDA FM procedures.	No	M
Overall Inherent Risk				M
CONTROL RISK				
Internal control Weak internal control environnement	S	An AMP will be prepared and adopted with a clear description of (i) measures of controls, (ii) the approval and authorization processes, (iii) the supervision process. The Borrower will use the Project Preparation Advance to prepare an Administrative and Accounting manual before effectiveness	No	M
		A consultant will be recruited to perform quarterly ex-post internal audits.	No	

Description of Risk	Risk rating	Risk Mitigation Measures incorporated in Project Implementation	Condition of Effectiveness (Yes/No)	Residual Risk/ (Risk) rating
Budgeting Delay on the activities planning and the budget adoption. Ineffectiveness of the monitoring of activities and budget execution.	S	The budgeting procedures will be defined in an Administrative, Financial and Accounting procedures manual.	No	S
Accounting Lack of Accounting staff. Lack of accounting software. Delay on the submission on supporting documents by Technical implementing agencies to PCU for bookkeeping.	S	A Financial Management Officer and an Accountant will be recruited. Accounting software will be set up. The roles and responsibilities of the PCU and Technical implementing agencies will be clearly defined in the FM Procedures.	Yes	M
Funds Flow	M	Designated accounts will be opened and managed by the PCU and DI	No	M
Financial Reporting Delays on submission of IFRs	M	The format and contents of the Interim Financial Reporting will be agreed on during negotiation. The accounting system will be customized to generate financial tables	No	M
Auditing Delay on the submission of the audit report.	S	An external auditor with Bank acceptable experience and qualification will be recruited.	No	M
Overall Control Risk	S			M
Overall Risk	M			
H – High S – Substantial M – Moderate L – Low				

Action Plan

Action	When	By whom
1. Appoint a Financial Management Officer to handle FM and accounting activities:	By Effectiveness	Borrower
2. Set up a computerized financial and accounting system	By Effectiveness	Borrower
3. External Audit Selection of the auditor	4 months after effectiveness	Borrower / PCU
4. Internal Audit Selection of the consultant to perform quarterly review	4 months after effectiveness	Borrower/PCU

Conclusion of the financial assessment

40. The conclusion of the assessment is that the financial management arrangements will meet the Bank’s minimum requirements under OP/BP10.00 once the mitigation measures are implemented. The overall residual risk rating for the PCU is **Moderate**.

Financial Management Implementation Support Plan

41. The objective of the implementation support plan is to ensure the project maintains a satisfactory financial management system throughout the project’s life. The Bank Financial Management Specialist in charge of this project will monitor the timely implementation of the financial management arrangements. However, intensity of implementation support could be reassessed upon the evolution of the rating for the overall control risk.

42. Based on the outcome of the FM risk assessment, the following implementation support plan is as follows.

FM Activity	Frequency
Desk reviews	
Interim financial reports review	Quarterly
Audit report review of the program	Annually
Review of other relevant information such as interim internal control systems reports.	Continuous as they become available
On site visits	
Review of overall operation of the FM system	Two times a year
Monitoring of actions taken on issues highlighted in audit reports, auditors’ management letters, internal audit and other reports	As needed
Transaction reviews (if needed)	As needed
Capacity building support	
FM training sessions	During implementation, as and when needed.

B. Disbursement

Activities	Amount (US\$ million)	IDA funding (US\$ million)	GEF funding (US\$ million)
Component 1: Support to sector actors	11.00	8.50	2.50
Sub-Component 1.1: Improved Rural Communities and Small-Scale Farmers' Capacity	7.00	4.5	2.50
Technical assistance to assist rural communities	4.00	4.00	0.00
Technical advisory services for small-scale farmers	1.00	0.50	0.50
Demonstration and implementation of techniques for sustainable land management	2.00	0.00	2.00
Component 1.2: Improved Selected Key Stakeholders' Capacity	3.00	3.00	0.00
Support to APIX	1.00	1.00	0.00
Professional training and applied research (coordinated by UGB)	0.50	0.50	0.00
Capacity building for horticultural interprofessions (coordinated by SCA)	1.00	1.00	0.00
Rehabilitation works of the Agropole	0.50	0.50	0.00
Component 1.3: Support to the land management process	1.00	1.00	0.00
Component 2: Development of irrigation infrastructure and sustainable natural resources management	68.50	65.50	3.00
Sub-Component 2.1: Irrigation infrastructure and water resources management in the project areas	61.50	61.50	0.00
Primary infrastructure :			
-Feasibility study for the primary irrigation infrastructure in the Ngalam and supervision of works	2.00	2.00	0.00
-Environmental and social impact study	0.50	0.50	0.00
-Works for primary irrigation in the Ngalam	20.00	20.00	0.00
-Fee for supervision of studies and works by SAED	0.50	0.50	0.00
Secondary infrastructure and tertiary works :			
- Works for secondary block development	9.00	9.00	0.00
-Equipment for secondary block development	9.50	9.50	0.00
-Tertiary irrigation	10.00	10.00	0.00
-Inputs for small producers	6.00	6.00	0.00
-Environmental and social impact studies for parcels	0.80	0.80	0.00
-Fee for supervision of studies and works by SAED	0.20	0.20	0.00
Construction of secondary infrastructure	2.00	2.00	0.00
Sustainable management of water resources:			
-Environmental audit of the delta	0.50	0.50	0.00
-Technical assistance to OLAG et SAED for implementation of environmental audit recommendations	0.50	0.50	0.00
Sub-Component 2.2: Matching Grants for SMEs and Producers Associations	4.00	4.00	0.00
Sub-Component 2.3. Sustainable Management of classified forests and natural reserves	3.00	0.00	3.00

Services and operational cost for the protection of classified forests and natural reserves	1.40	0.00	1.40
Works for the protection of classified forests and natural reserves	1.50	0.00	1.50
Equipment for the protection of classified forests and natural reserves	0.10	0.00	0.10
Component 3.: Project Coordination, Management, Communication, Monitoring and Evaluation	6.00	5.50	0.50
Component 3.1. Project coordination	3.00	3.00	0.00
Contracts for PCU staff	1.50	1.50	0.00
Equipment	0.30	0.30	0.00
Office space	0.50	0.50	0.00
Vehicles	0.20	0.20	0.00
Training	0.20	0.20	0.00
Operating costs	0.30	0.30	0.00
Component 3.2 M&E and impact evaluation	2.00	1.50	0.50
Capacity building for M&E and impact evaluation implementation (SAED, DAPSA, ANGMV):			
<i>Field Missions</i>	0.90	0.80	0.10
<i>Training</i>	0.40	0.40	0.00
<i>Equipment</i>	0.30	0.30	0.00
<i>Data treatment</i>	0.40	0.00	0.40
Component 3.3.: Communication	1.00	1.00	0.00
Project preparation Advance	0.50	0.50	0.00
Review of legal framework for land	0.05	0.05	0.00
Support to land identification by rural communities and technical needs assessment	0.10	0.10	0.00
Prefeasibility study for the primary irrigation infrastructure in the Ngalam	0.05	0.05	0.00
Environmental and Social Assessment Framework	0.10	0.10	0.00
Pest Management Plan	0.10	0.10	0.00
Resettlement Policy Framework	0.10	0.10	0.00
TOTAL	86.00	80.00	6.00

Category	Amount (US\$ million)	Percentage of expenditures to be financed	
		IDA funding (percent)	GEF funding (percent)
Goods, works, consultants services (including audits) Operating Costs and Training	82	92.7	7.3
Matching Grants under sub-component 2.2	4	100.0	0.0
Total	86	93.0	7.0

C. Procurement

43. Procurement activities will be managed by the Project Coordination Unit. The PCU will have overall responsibility in carrying the following activities: (i) managing the overall procurement activities, and ensuring compliance with the procurement process described in the relevant manuals; (ii) preparing and updating the procurement plan annually; (iii) preparing bidding documents, draft RFPs, evaluation reports, and contracts in compliance with Bank procedures; and (iv) seeking and obtaining approval of national entities and of IDA on procurement documents as required.

44. Procurement for the proposed project will be carried out in accordance with the World Bank's documents (i) "[Guidelines: Procurement of Goods, Works and Non-Consulting Services under IBRD Loans and IDA Credits & Grants by World Bank Borrowers](#)" dated January 2011; (ii) "[Guidelines: Selection and Employment of Consultants under IBRD Loans and IDA Credits & Grants by World Bank Borrowers](#)" dated January 2011, and the provisions stipulated in the Legal Agreement; and (iii) "Guidelines on Preventing and Combating Fraud and Corruption in Projects Financed by IBRD Loans and IDA Credits and Grants", dated October 15, 2006, as revised in January 2011, and the provisions stipulated in the Financing Agreement. These procedures will be described in the PIM.

45. Assessment of SAED's capacity to implement certain procurement activities was conducted during preparation. SAED will be responsible for procurement related to irrigation activities in components 1.1 and 2.1. This is technical procurement support (draft bidding documents, make evaluations-but contract signature and payments to be done by PCU). SAED has extensive experience in procurement, with a large range of partners (AfDB, AFD, IsDB), UE, USAID, etc.). The institution is familiar with the World Bank procurement and consultants guidelines and the national procurement procedures. SAED has also been an implementing agency for the PDMAS. The institution has manuals of procedures which have to be updated to take into account the specificities of the proposed project.

46. The key risk identified is that staff involved in the project that may not have experience with Bank procedures will be responsible for process control and approval. This could cause mistakes, leading to slowness in procurement decisions, reputational risks to the Bank and the project, and delays towards attaining the PDO.

47. The residual project risk for procurement is *moderate* after adoption of the following mitigation measures: (i) two qualified procurement specialists will be recruited to ensure compliance with World Bank procurement procedures; S/he will be based within the PCU; (ii) a manual of procedures will be prepared within three months of project effectiveness, as part the Project Implementation Manual, to clarify the role of each team member / institution involved in the procurement process, specifically with regards to the review and approval system ; (iii) a workshop will be organized at the beginning of the project to train all key stakeholders involved in procurement on World Bank procurement procedures and policies; and (iv) an adequate filing system would be centralized and set up for the project records at the PCU. The project will finance appropriate equipment, and the procurement specialists will be trained to ensure compliance with the Bank's procurement procedures.

48. **Procurement Plan:** The Borrower prepared a draft procurement plan for the first 18 months of project implementation. This plan will be updated annually to reflect the latest circumstances. It will also be available in the project's database and in the Bank's external website. The Procurement Plan covering activities planned for the first eighteen months after project effectiveness is as follows:

Goods, works and non-consulting services with methods and time schedule

1	2	3	4	5	6	7	8
Ref.	Contract Description	Estimated Cost (US\$ million)	Procurement Method	Domestic Preference Yes / No	Review by bank (Prior / Post)	Expected Bid Opening Date	Comments
Component 1: Support to sector actors							
	Improved RC and small-scale farmers' capacity						
1.1.1	Equipment for rural communities for land management	0.5	ICB	Yes	Prior	17-Aug-14	
Component 2: Development of irrigation infrastructure and sustainable natural resources management							
	Irrigation infrastructure and water resources man. in the project areas						
2.1.1	Works for the primary irrigation	20.0	ICB	No	Prior	15-Jan-15	
2.1.2	Works for secondary parcel development	22	ICB	No	Prior	17-Nov-14	
2.1.3	Equipment for secondary parcel development	9.5	ICB	No	Prior	17-Nov-14	
2.1.4	Equipment for terminal/ in-parcel development	9	ICB	No	Prior	15-Dec-14	
2.1.5	Inputs for small producers	5	ICB	No	Prior	15-Dec-14	
	Sustainable Man. of classified forests and natural reserves						
2.2.1	Works for protection of classified forests and natural reserves	1.5	NCB	No	Prior	15-Feb-15	First 2 NCB works contract
2.2.2	Equipment for the protection of classified forests and natural reserves	0.1	NCB	Yes	Post	17-Aug-14	
Component 3: Project Coordination, Management, Communication, Monitoring and Evaluation							
	Project coordination						
3.1.1	Equipment for PCU	0.3	NCB	No	Post	15-Jan-14	First 2 goods contracts
3.1.2	Vehicles for PCU	0.2	NCB	No	Post	27-Jan-14	First 2 goods contracts
	M&E and impact evaluation						
3.2.1	Equipment for M&E	0.3	NCB	Yes	Post	18-Jul-14	

Consultancy Assignments with Selection Methods and Time Schedule

1	2	3	4	5	6	7	8
Ref.	Contract Description	Estimated Cost (US\$ million)	Procurement Method	Domestic Preference Yes / No	Review by bank (Prior / Post)	Expected Bid Opening Date	Comments
Component 1: Support to sector actors							
	Improved RC and small-scale farmers' capacity						
1.1.1	TA to rural communities, studies for secondary and tertiary irrigation/rural road/energy investments	5	QCBS	No	Prior	17-Nov-13	
1.1.2	Environmental and social impact study for secondary irrigation investments	0.8	QCBS	No	Prior	17-Apr-14	
Component 2: Development of irrigation infrastructure and sustainable natural resources management							
	Irrigation infrastructure and water resources man. in the project areas						
2.1.1	Feasibility study for primary irrigation investments and supervision of works	2.0	QCBS	No	Prior	17-Apr-14	
2.1.2	Environmental and social impact study for primary irrigation investments	0.5	QCBS	No	Prior	18-Jul-14	
2.1.3	TA to SAED and OLAG for implementation of audit recommendations	1.0	QCBS	No	Prior	17-Apr-14	
2.1.4	Detailed environmental Audit for the Delta	1.0	QCBS	No	Prior	15-Jan-14	
	Sustainable Management of classified forests and natural reserves						
2.2.1	Mapping and inventory of each classified forest and naturel reserve sites	0.17	QCBS	No	Prior	17-Apr-14	
2.2.2	Elaboration of participative and integrated master plans and their dissemination	0.1	QCBS	No	Prior	18-Jul-14	
2.2.3	Development of local conventions for resource management	0.05	IC	No	Post	17-Sep-14	
Component 3. Project Coordination, Management, Communication, Monitoring and Evaluation							
	Project coordination						
3.1.1	Coordinator	0.08	IC	No	Post	15-Jan-14	
3.1.2	Head of finance and admin (DAF)	0.05	IC	No	Post	15-Jan-14	
3.1.3	Procurement specialist	0.05	IC	No	Post	15-Jan-14	
3.1.4	Communication specialist	0.04	IC	No	Post	15-Jan-14	
3.1.5	Agribusiness specialist	0.05	IC	No	Post	15-Jan-14	
3.1.6	Irrigation specialist	0.05	IC	No	Post	15-Jan-14	
3.1.7	Environmental specialist	0.04	IC	No	Post	15-Jan-14	
3.1.8	Social safeguards specialist	0.04	IC	No	Post	15-Jan-14	
3.1.9	M&E specialist	0.05	IC	No	Post	15-Jan-14	
3.1.10	Accountant	0.03	IC	No	Post	15-Jan-14	
	M&E and impact evaluation						
3.2.1	Consultant for data treatment	0.3	QCBS	No	Prior	18-Jul-14	

49. **Procurement Documents.** Procurement will be carried out using the Bank's Standard Bidding Documents (SBDs) for all ICB goods and works, and Standard Request for Proposal (RFP) for the recruitment of consultants. For National Competition Bidding (NCB), while waiting for the government and the World Bank to respectively validate and give the no objection on the national bidding documents that are under preparation, the Borrower will use the Bank's SBD for NCB for goods and works. In the same vein, the Sample Form of Evaluation Reports developed by the Bank will be used until the new national samples are reviewed and satisfactory to the Bank. The ICB's Threshold for works is US\$5,000,000 in Senegal and US\$500,000 for goods.

50. **Advertising Procedure.** General Procurement Notice (GPN), Specific Procurement Notices (SPN), Requests for Expression of Interest, results of the evaluation and contracts award should be published in accordance with advertising provisions in the World Banks Procurement Guidelines.

51. **Procurement of Works:** Works estimated to cost above US\$5,000,000 equivalent per contract may be procured under ICB. Works estimated to cost less than US\$5,000,000 may be procured under NCB. Goods estimated to cost less than US\$100,000 equivalent per contract may be procured under contracts awarded on the basis of shopping procedures, depending on local availability.

52. **Procurement of Goods:** Goods estimated to cost above US\$500,000 equivalent per contract may be procured under ICB. Goods estimated to cost less than US\$500,000 may be procured under NCB. Goods estimated to cost less than US\$100,000 equivalent per contract may be procured under contracts awarded on the basis of shopping procedures, depending on local availability.

53. **Selection of Consultants:** Short lists of consultants for services estimated to cost less than US\$200,000 equivalent per contract may be composed entirely of national consultants in accordance with the provisions of paragraph 2.7 of the Consultant Guidelines. The procurement plan indicates the selection methods and all cases where IDA review and no objection are needed.

54. **Procurement of non-consulting services:** Non-consulting services to be financed under the Project will include mainly small operating needs for the project execution. These services are likely to be of small values, and as such, they may be procured by shopping in accordance with paragraph 3.5 of the Procurement Guidelines. In case of large value contracts, NCB procedures will be used in accordance with the same provisions as procurement of goods.

55. **Operating Costs:** Incremental recurrent expenditures will be procured using the implementing agency's administrative procedures, which will be elaborated and found acceptable to the Association. Therefore, procurement procedures and SBDs to be used for each procurement method, as well as model contracts for goods procured, will be presented in the PIM that will be developed by the PCU.

56. **Bank’s Prior Review Thresholds.** The Procurement Plan sets forth those contracts which shall be subject to the World Bank’s Prior Review. All other contracts shall be subject to Post Review by the World Bank. Relevant contracts below prior review thresholds listed below which are deemed complex and/or have significant risk levels will be prior-reviewed. Such contracts are also identified in the procurement plan. Summary of Prior-review and procurement method thresholds for the project are indicated in Table 3: . All terms of reference for consultants’ services, regardless of contract value, shall also be subject to the World Bank’s prior review.

Table 3: Thresholds for Procurement Methods and Prior Review

1. Expenditure Category	2. Threshold for Method (US\$)	3. Procurement Method	4. Contracts Subject to Prior Review
Works	>=5,000,000 < 5,000,000 <100,000	ICB NCB Shopping Direct Contracting	All First 2 contracts None All
Goods and non-consulting services.	>=500,000 <500,000 <50,000	ICB NCB Shopping Direct Contracting	All First 2 contracts None All
Consulting services from firms & NGOs	>=200,000 <200,000	QCBS QCBS, CQS, LCS, FBA, QS Single Source	All contracts of US\$200,000 and above The two first contracts under US\$200,000 All single source
Individual consultants		IC	All contracts of US\$100,000 and above
Single Source			All
Note: All Term of reference regardless of the value of the contract are subject to prior technical review			

ICB – International Competitive Bidding QCBS -- Quality and Cost-Based Selection method
 NCB – National Competitive Bidding CQS – Consultants’ Qualification Selection
 IC – Individual Selection method

57. **Fraud, Coercion and Corruption:** All procurement entities as well as bidders and service providers, i.e., suppliers, contractors, and consultants shall observe the highest standard of ethics during the procurement and execution of contracts financed under the project in accordance with paragraphs 1.14 and 1.15 of the Procurement Guidelines and paragraph 1.22 and 1.23 of the Consultants Guidelines.

D. Institutional Arrangement for Safeguards Implementation

58. The ESMF, RPF and PMP include institutional arrangements, outlining the roles and responsibilities for the various stakeholder groups involved in each participating region at the central and local levels, for screening, reviewing, and approving subprojects, as well as implementing and monitoring mitigation measures for those subprojects.

Safeguards Supervision

59. The supervision of safeguards implementation for the project will be carried out and appropriately budgeted as part of overall project implementation, by GoS/MoA in conjunction with and relevant experts involved in social and environmental mitigation. World Bank teams will also include the Social and Environmental Safeguards Specialists and the Land Specialist who will continue to have the overall responsibility for supervision of safeguards activities. They will conduct, at least, twice a year a comprehensive supervision of safeguard activities of the project, participate in the wrap-up meeting to discuss findings and draft an action plan to improve implementation. The PCU, in conjunction with each national counterpart, will prepare and update detailed reports on the implementation of the ESMF (and subsequent ESIA/ESMPs, as applicable), RAP and the PMP, before Bank implementation support missions.

Participatory Safeguards Monitoring and Evaluation

60. The project is supporting the development of a sub-sector of commercial agriculture with the potential for transformational changes in the contribution of the agricultural sector to rural and urban livelihoods, job creation in primary and secondary production and in increasing the production levels of especially staples. A focus on result monitoring and evaluation and related learning, transparency and accountability in the project will provide useful lessons to formulate future and larger commercial agriculture interventions in Senegal and attract additional funding from other Development Partners.

E. Monitoring & Evaluation

61. The monitoring and evaluation of the project will be critical for assessing its effectiveness, as well as continuously improving it during its duration. Identifying and tracking through time manageable but relevant indicators is essential to measure the projects' achievements and outputs and inform its implementation. Measuring impact through rigorous methods will allow for expanding future investments, as well as guide future projects in the Africa Region and beyond. In addition to a significant focus on best-in-class M&E during implementation, particular attention will be paid to building sustainable monitoring capacity beyond the life of the project. It will build on existing M&E capacity in the MoA and executing agency but seek further additional support as needed (particularly from the SAWAP BRICKS initiative).

62. The Results Framework and Monitoring is outlined in Annex 1, including the projects' Results and Intermediate Indicators. The main objective of the project is to develop inclusive commercial agriculture and sustainable land management in project areas. As discussed at length throughout this document, significant constraints hinder the capacity of the agribusiness industry in achieving the targets outlined and, hence, there is an untapped potential once the institutional, financial and informational barriers are removed by the project. In that vein, the main outcomes of interest of this project are net creation of growth in the region/sectors of focus and the change in productivity rates of the agri-business enterprises. These will be tracked through regular enterprise and household surveys as part of the impact evaluation of this project.

63. It is envisioned that two impact evaluations will be integrated into the project. The impact analysis will be able to capture intended and unintended benefits of project interventions, with a specific interest in investigating differences in program impact by gender. The empirical analysis for both impact evaluations will primarily be built on survey data deliberately collected for this purpose: (1) a baseline survey which will be carried out prior to respondents' exposure to any relevant intervention activities; (2) conditional on sufficient implementation, a mid-term survey; and (3) an end-line survey which will be administered prior to project completion. Information will be collected from representatives of both the treatment and comparison groups at multiple levels (households and farmer's associations/enterprises). While the empirical analysis will be carried out by impact evaluation experts from the World Bank in collaboration with the PCU, the data collection will necessarily be contracted out to an organization/firm with extensive experience and capacity in the administration of large-scale surveys. In addition, an effort will be made to integrate other data sources such as the administrative records compiled through the M&E system.

64. Although this empirical research methodology will be at the core of the impact evaluation component, complementary quantitative or qualitative studies may be conducted selectively in order to investigate features that are identified as having decisive influence on the impact of the overall project.

65. The impact evaluation will be based to a large extent on the quantitative comparison of a treatment group with a constructed control group. By definition, access to all or a specific subset of the project components is given to the treatment group only. The aim of this practice is to establish a plausible counterfactual, which will allow for identification of precise estimates of the causal effect of an intervention (or a set of interventions) on the outcomes of interest separately from the effect of other time-varying factors. It is crucial to tailor the selection of the treatment and the control group to the intervention. This exercise is key to guaranteeing statistical identification of changes that can be causally linked to the intervention. The main challenge will lie in identifying project features that offer the potential to select a control group sufficiently suitable to allow for the envisaged analysis.

66. Because the project is designed to promote growth in the horticulture sector in the Ngalam Valley and Lac de Guiers areas, the main focus of the impact evaluation will be on relevant indicators including agricultural productivity (in terms of production per hectare) and incomes of small producers (disaggregated by gender groups). Nevertheless, the impact evaluation offers the opportunity to broaden the outcome space such that additional and potentially important determinants of the well-being of female farmers can be analyzed as well. Typically, these determinants lie outside the scope of customary M&E systems and may include indicators for intra-household bargaining power and decision-making, expectations, and aspirations.

67. Results-oriented-level M&E indicators and implementation will be closely reviewed by the Project Steering Committee and by the World Bank team in charge of the supervision of the project to ensure that the required targets are achieved. If planned results are not reached, the supervision team will work with the project team to define measures to address this.

68. The management of the impact evaluations will be a responsibility of the project. It will fund and contract out the surveys needed for the impact monitoring and evaluation. It will be responsible for overseeing, designing, implementing, analyzing, and disseminating the impact evaluations studies. An Implementation Completion Report (ICR) will be prepared following project closing.

Partnership arrangements

69. The project is co-financed by GEF. GEF has indicated a project commitment of US\$6 million over the entire project period. GEF's strategic priorities for their assistance to Senegal are articulated around three key areas: sustainable land management, climate change mitigation and sustainable forest management. Through this fully blended co-financing, the project will support an emerging priority in support of Africa's drylands sustainable development, whereby solutions to unlock the drylands' growth potential and to better manage shocks and vulnerability to climate change are brought together. The Sahel and West Africa Program (SAWAP) in support of the Great Green Wall that was approved by the GEF Council in May 2011 also offers a regional framework for SSIAP including using services of the BRICKS initiative enhancing regional knowledge sharing and monitoring. The SAWAP addresses major issues related to land degradation, including food security, climate change mitigation and adaptation, to support sustainable development in Burkina Faso, Chad, Ethiopia, Mali, Mauritania, Niger, Nigeria, Senegal, Sudan, Benin, Togo, and Ghana. The GEF funds will be administered in line with the normal obligations associated with IDA-financed projects (and as described herein under perimeters on procurement, financial management and monitoring and evaluation).

70. The project will link up with IFC operations in Senegal. The role of IFC could most usefully be oriented toward facilitating investment in a small number of keystone projects identified as critical for strengthening value chains in both the export and domestic markets. It could take the form of transaction preparation and/or direct IFC co-investment.

Annex 4: Operational Risk Assessment Framework (ORAF)
REPUBLIC OF SENEGAL: Sustainable and Inclusive Agribusiness Development Project

1. Project Stakeholder Risks		Rating: High			
<p>Description: Potential conflicts of interests between government, private sector and rural communities if the vision is not shared or if implementation results disadvantage one group versus another. Private investors may find that incentives are not enough for their involvement in the project.</p>	<p>Risk Management: Project preparation included wide stakeholders' consultations. Design of incentives to rural communities and private investors have been informed by preliminary studies. Project implementation will be done through an inclusive and transparent process to ensure that public and private investments yield the greatest possible benefits to be shared across beneficiaries. The project supports a "match making" process between rural communities and potential investors. This process must meet specifications developed with rural communities and could take the form of an international tender for the developed areas. The specifications would include the development by the investor of irrigation infrastructure that would also benefit small producers.</p>				
		Resp: Counterpart&Bank	Stage: Prep. & Impl.	Due Date: Ongoing	Status: Ongoing
<p>Public perception that the Bank is favoring massive land grabs by international agribusiness firms.</p> <p>Local communities may have claims over land allocated to outsiders and private agribusiness companies. Depending on the location, land governance and tenure conditions can pose risks to the project. A wide range of subsidiary rights (i.e., below the level of ownership) often exist and may be difficult for outsiders to discern.</p>	<p>Risk Management: Land for agriculture will not be acquired through compulsory acquisition under the project. Project includes rural communities' consultations and a fully-fledged communications and outreach strategy towards rural communities and broad project stakeholders. The project will provide technical assistance to rural communities in the targeted areas to manage the land allocation process themselves, on the basis of a resource and land user right mapping. Land allocation processes will be governed by the Land Framework to be developed as a condition of project effectiveness, reflecting the principles and procedures set forth in Annex 6 of this PAD and Annex 10 of the RPF. The project will address risks related to land governance and tenure using a variety of tools – such as carefully screening potential investment locations, checking the efficiency of the consultation process driven by rural communities deploying relevant safeguards instruments, and providing support for land use rights inventories, participatory planning, enhanced consultation, strengthened negotiation capacity and contract design. The project will ensure, as part of the Resettlement Policy Framework and Land Framework, respect for customary land rights and fair compensation to involuntary displaced people if applicable, before any new allocation of land in the project areas.</p>				
		Resp: Counterpart&Bank	Stage: Prep. & Impl.	Due Date: Ongoing	Status: Ongoing
<p>Rural communities' rights may not be protected. They may not have appropriate recourse in case contractual obligations are not fulfilled. Similarly, investors may face the risk of land expropriation by influential local stakeholders after the agribusiness begin to show profitability</p>	<p>Risk Management: A grievance handling and dispute resolution mechanism has been established to help with the applications of contractual clauses between rural communities and investors. The contractual agreement between the Rural Communities and investors will include such mechanisms of dispute resolution to be agreed between the communities, local authorities and investors. It will be described in the Project implementation Manual. Furthermore, individual agribusiness will be issued a sub-lease from the rural communities. In case of default by local stakeholders the agreed dispute/conflict resolution mechanism will also serve as the basis for complaints.</p>				
		Resp: Counterpart&Bank	Stage: Prep. & Impl.	Due Date: Ongoing	Status: Ongoing

2. Implementing Agency Risks (including fiduciary)					
2.1 Capacity		Rating:	Substantial		
Description: Risk related to weak overall internal capacity compounded by complexities in procurement and contract management activities under the project. Weak capacity of project implementation agency may undermine implementation.		Risk Management: Independent project implementation unit with qualified technical staff will be responsible for day-to-day management. The project has initially leveraged the experienced and capable implementation unit of the PDMAS			
		Resp: Counterpart	Stage: Prep & Implem.	Due Date: Effectiveness	Status: Ongoing
2.2 Governance		Rating:	High		
Description: Risk of interference in selection of consultants that could undermine fair and transparent procurement processes. Lack of transparency in selection of consultants and potentials for poor selection and hence poor outputs remain.		Risk Management: The Bank procurement staff will undertake meticulous review of procurement processes and actions undertaken. A procurement plan will be drawn and cleared by the Bank, identifying among other things, the procurement methods to be adopted, and limiting the potentials for sole sourcing.			
		Resp: Counterpart and Bank	Stage: Preparation & Implementation	Due Date: Ongoing	Status: Ongoing
		Resp: Bank	Stage: Preparation & Implementation	Due Date: three months of project effectiveness	Status: Ongoing
3. Project Risks					
3.1. Design		Rating:	Substantial		
Description: Risk of making the project too complex to implement successfully. The project design could be rendered technically complex if it deals with several value chains and sectors (agriculture, infrastructure, etc.). The Growth Pole approach is new in Senegal and preparation timeframe does not allow the full completion of main studies being carried out, namely the infrastructure feasibility studies and the Demand Assessment to ensure likeliness of Project attraction on private sector.		Risk Management: The project has been made markedly simpler by focusing on one growth pole and one agriculture subsector. The project supports a phased approach whereby building satisfactory land management capacity of rural communities will be a pre-requisite to infrastructure developments and land allocation to private investors. Feasibility studies related to infrastructure developments and demand assessments will be completed in parallel to this capacity building effort, therefore it is not foreseen that they will constitute a bottleneck in project implementation.			
		Resp: Counterpart and Bank	Stage: Preparation	Due Date: Appraisal	Status:
3.2. Social & Environmental		Rating:	Substantial		
Description: <i>Environmental and Social impact:</i> A Category A Project that triggered a number of Bank safeguards policies. The IDA supported part - Irrigated agriculture-based development of the areas - may generate negative environmental impacts, including but not limited to increased use of pesticides, depletion of soils, water and other natural resources. Increased irrigated areas may also imply resettlement and /or increased population. International waters related issues are also to be considered. Relocation of populations may be necessary in certain areas. However, the		Risk Management: The project has selected a growth pole with low and environmental and social disruptions and includes SLWM practices; The project has prepared social, environmental and safeguard framework for investments still to be identified during execution. Specific environmental and social management plans will be developed during implementation. Close monitoring of safeguards will be supported during implementation. Land rights of local communities will be respected and land allocation and investment decision processes will be governed the Land Framework in accordance with Annex 6. Appropriate staffing of PIU with both social and environmental staff and adequate training of these staff. The environmental management investments will be focused on climate change mitigation and adaption measures. The SLWM and soil management techniques are expected to reduce negative			

<p>project benefits from a GEF support promoting SLWM techniques and practices as integral component of the IDA project. It provides further for sustainable management of selected adjacent classified forests and natural reserves. There are three related risks to the GEF support:</p> <ul style="list-style-type: none"> • Climate change may undermine the gains of management practices in particular related to natural regeneration and afforestation efforts. • In addition, low awareness concern among communities and migrants on resource degradation in forest areas. • Low demand and adoption rate to implement and sustain SLWM and SFM production practices 	<p>effects of climate variability. The SFM activities will promote natural regeneration and to limited extent afforestation of climate-resilient tree species. Forest management plans will include localized climate monitoring.</p> <p>Rural community members are aware of the impacts of resource degradation on agriculture yields and forest ecosystem services (fuelwood availability, water pollution). Technical assistance, training and awareness campaigns will increase knowledge and responsiveness.</p>			
	<p>Resp: Counterpart and Bank</p>	<p>Stage: Preparation and Implementation</p>	<p>Due Date: Appraisal</p>	<p>Status: Ongoing</p>
<p>3.3. Program & Donor</p>	<p>Rating:</p>	<p>Low</p>		
<p>Description: <i>Others' donors complementary interventions</i> Risk that complementary interventions from other donors may not materialize and negatively impact interventions supported by the WB project. Risk of other donors not collaborating fully.</p>	<p>Risk Management: The only co-financing that the project is using is a US \$6 million GEF grant, which is administered by the Bank. However the team will maintain continued consultation with other donors showing interest in sharing experiences on growth poles.</p>			
	<p>Resp: Bank</p>	<p>Stage: Preparation and Implementation</p>	<p>Due Date: Appraisal</p>	<p>Status: Ongoing</p>
<p>3.4. Delivery Monitoring & Sustainability</p>	<p>Rating:</p>	<p>Moderate</p>		
<p>Description: Risks of in-country project teams not having sufficient capacity to monitor and provide implementation support</p>	<p>Risk Management: The project will require significant monitoring and implementation support, in line with other projects in the country portfolio. More than 58 World Bank staff weeks - mostly based in the region - will be dedicated to project implementation support. M&E system will be complemented by a rigorous impact evaluation system to be fully integrated into project design and implementation in order to capture the additionality of the project. This will create real-time feedback mechanisms for corrective actions throughout the life of the project. Sustainable monitoring capacity beyond the life of the project will be built within existing M&E capacity in the Ministry of Agriculture.</p>			
	<p>Resp: Bank</p>	<p>Stage: Preparation & Implementation</p>	<p>Due Date : Effectiveness and afterwards</p>	<p>Status: ongoing</p>
<p>4. Overall Risk</p>				
<p>Implementation Risk Rating: HIGH</p>				

Annex 5: Implementation Support Plan

REPUBLIC OF SENEGAL: Sustainable and Inclusive Agribusiness Development Project

Strategy and Approach for Implementation Support

1. The innovative elements of the project – strong private sector orientation, the deployment of innovative approaches to inclusive business models– places additional burden on the supervisory responsibilities of the Bank. The combination of skills and competencies required by the PCU and technical implementing agencies must be mirrored by the supporting Bank team. The Bank’s task team during preparation has included specialists in: agriculture and agribusiness, private sector development, irrigation, land issues, environmental issues, as well as financial management, procurement and safeguards specialists. This cross-sectoral approach must continue into implementation.

2. Given the flexibility and demand-led orientation of the project, in particular Component 2, a major focus of the implementation support will be to ensure that project interventions are appropriate –specifically that viable and inclusive partnerships with private investors are identified– and deployed in a manner consistent with the procedures to be laid down in the PIM. The project has made certain assumptions with regard to the level of public support required to leverage private investment. This will be closely monitored to ensure that this support is minimized in order to maximize value for money and cost effectiveness of the project throughout implementation – and, in so doing, helping to maximize the number of beneficiaries given project allocations.

Implementation Support Plan

Skills Needed	Number of Staff Weeks	Number of Trips	Comments
Task Team Leader	10 SWs annually	2	
Land specialist	5 SWs annually	2	Based in Washington DC
Water management and irrigation specialist	4 SWs annually	2	Based in Ghana
Road specialist	4 SWs annually	2	
Energy specialist	4 SWs annually	2	
Private sector specialist	4 SWs annually	2	Based in Washington DC
Environmental specialist	4 SWs annually	2	Based in Washington DC
Financial management specialist	3 SWs annually	0	Based in Senegal/or in the region
Procurement specialists	4 SWs annually	0	Based in Senegal/or in the region
Social safeguard specialist	4 SWs annually	2	Based in Senegal/or in the region
Communication Specialist	4 SWs annually	2	Based in Washington DC
Environmental safeguard specialist	5 SWs annually	2	STC

FM implementation Support

3. Supervision activities will include: (i) on-site mission (ii) review the financial management aspects of quarterly IFRs; (iii) review of annual audited financial statements and management letter as well as timely follow up of issues arising; and (iv) participation in project supervision missions, as appropriate. The Bank FMS in charge of this project will monitor the timely implementation of the financial management arrangements. However, intensity of supervision could be reassessed upon the evolution of the rating for the overall control risk.

4. Based on the outcome of the FM risk assessment, the following implementation support plan is proposed. The objective of the implementation support plan is to ensure the project maintains a satisfactory financial management system throughout the project's life.

FM Activity	Frequency
Desk reviews	
Interim financial reports review	Quarterly
Audit report review of the program	Annually
Review of other relevant information such as interim internal control systems reports.	Continuous as they become available
On site visits	
Review of overall operation of the FM system (for Moderate risk)	One time a year
Monitoring of actions taken on issues highlighted in audit reports, auditors' management letters, internal audit and other reports	As needed
Transaction reviews (if needed)	As needed
Capacity building support	
FM training sessions	During implementation and as and when needed.

Annex 6: Facilitating Access to Land
SENEGAL: Sustainable and Inclusive Agribusiness Project (SSIAP)

I. Introduction – SSIAP and Land Issues

1. The SSIAP will have potentially significant implications for land rights in the geographic areas supported by the project. Land-related impacts may result from three types of project-supported activities:

- Project facilitation of the assembling of agricultural land into relatively large holdings for commercial horticulture purposes;
- Project activities for improving rural communities (*Communautés rurales*) land management capacities;
- The construction of infrastructure or other facilities, including irrigation canals, warehouses, feeder roads, etc., that may require the acquisition of land by the government on its own account or on behalf of a public-private partnership entity.

2. This Annex focuses primarily on issues arising from the first type of interventions – the facilitation of assembling of agricultural land into relatively large holdings for the purposes of commercial agricultural (horticulture) investment. This process is expected to occur first in the Lac de Guiers area, where a 40,000 hectare area has already been broadly pre-identified as containing potentially suitable areas for commercial investment– the exact location of future investment within that area will be determined during project implementation as prospective investors become engaged with government and local communities in the detailed design of the investments. Various preliminary studies¹ of this area have been conducted, both prior to and as part of project preparation, and the process of exploring investor interest is underway.

3. Similar efforts to facilitate the creation of larger farms, along with associated support for smallholders and rural communities, may be expected to take place in the Ngalam Region. Several areas of potential interest for commercial agriculture have been pre-identified in this region. These will be further narrowed down during implementation in response to the nature of investor interest and the first year will be focused on processing land identification by the rural communities themselves.

¹

- Etude du schéma directeur d'aménagement agricole de la zone du lac de Guiers. AGRER / SETICO, 2009.
- Etude d'état des lieux. Rapport sur les systèmes d'administration des terres. Activité de sécurisation du foncier dans le cadre du projet d'irrigation et de gestion des ressources en eaux de MCA Sénégal. Cirad / Fit-Conseils / Soned-Afrique. 2011.
- Développement de méthodes d'allocation de terrains par les communautés rurales et identification de leurs besoins en assistance technique - Zones de Gandon et du lac de Guiers. PDMAS – Cirad. 2013.

II. International Guidelines

4. Issues associated with the allocation of sizable areas of lands to agribusiness firms have received increasing international attention in recent years, in connection with the growing phenomenon of large-scale private investment in agricultural land, especially in Africa. These issues were a focus of the 2011 World Social Forum held in Dakar and are still under scrutiny by local and foreign NGOs. In response to concerns that these investments may potentially have negative impacts on local people and environments, the World Bank, IFAD, FAO and UNCTAD have jointly formulated a set of “Principles for Responsible Agricultural Investment that Respects Rights, Livelihoods and Resources” (RAI Principles). While these principles are currently under review for further refinement and elaboration by the Council on Food Security (CFS), they provide useful articulation of generally accepted international principles that will guide the implementation of this project. The relevant Principles include:

- Principle 1: Existing rights to land and associated natural resources are recognized and respected;
- Principle 2: Investments do not jeopardize food security but rather strengthen it;
- Principle 3: Processes for accessing land and other resources and then making associated investments are transparent, monitored, and ensure accountability by all stakeholders, within a proper business, legal, and regulatory environment;
- Principle 4: All those materially affected are consulted, and agreements from consultations are recorded and enforced;
- Principle 5: Investors ensure that projects respect the rule of law, reflect industry best practice, are viable economically, and result in durable shared value;
- Principle 6: Investments generate desirable social and distributional impacts and do not increase vulnerability;
- Principle 7: Environmental impacts due to a project are quantified and measures taken to encourage sustainable resource use while minimizing the risk/magnitude of negative impacts and mitigating them.

5. Furthermore, in May 2012 the Committee of World Food Security (CFS) endorsed the Voluntary Guidelines on the Responsible Tenure of Land, Fisheries and Forests in the context of National Food Security (Voluntary Guidelines). These guidelines are the result of a three-year process of consultations and negotiations started by FAO in 2009 and then finalized through CFS-led intergovernmental negotiations that included participation of civil society organizations, private and public sector representatives, international organizations and academic. They aim to promote secure tenure rights and equitable access to land, fisheries and forests with the overarching goal of achieving food security for all, and address a range of issues, such as:

- recognition and protection of legitimate tenure rights even under informal systems;
- best practices for registration and transfer of tenure rights, and making sure tenure administrative systems are accessible and affordable;
- ensuring that investment in agricultural lands occurs responsibly and transparently; and mechanisms for resolving disputes over tenure rights.

6. To the extent that the SSIAP is involved – directly or indirectly – in facilitating investment in agricultural land, the RAI Principles and Voluntary Guidelines have informed project design and will guide project implementation. These principles and guidelines will also inform the design of the agreements between communities and investors that will be facilitated by the project.

7. The SSIAP seeks to foster socially inclusive investments that are mutually beneficial for investors, landowners, local communities and the country. Land allocation under the SSIAP should be the result of open negotiation and voluntary leasehold transactions between rural communities and the investor, subject to appropriate oversight and guidance from the government. The project will promote an approach to inclusive investment that ensures that affected communities have the opportunity and responsibility: (i) to decide whether or not to make land available for investments, based on informed choices; (ii) to secure sustained and well-defined benefits; (iii) to receive fair compensation for the land (including common areas) and natural resources that they make available for investment; (iv) to engage in ongoing partnerships with investors and Government; and (v) to be able to hold investors accountable to their commitments.

8. In order to facilitate voluntary transactions, the project will consult extensively at village level and assist rural communities in the identification of suitable and available land, help support the design of different investment models and footprints, and provide facilitation support to the negotiation of leases. The project will strengthen the capacity of rural communities and secure land user rights access both for investors and local smallholders. The project will promote online publication of land allocation decisions by rural communities as a means to improve transparency and accountability. Furthermore, in areas that will be identified as project implementation goes forward, the project will complement secondary irrigation infrastructure financed by the private sector, as well as tertiary irrigation schemes for small-scale farmers.

9. Project involvement in land aims to help ensure that commercial agriculture land transactions occur in a manner that contributes to secure tenure arrangements both for investors and smallholders, and beneficial outcomes for land owners and users. Achieving these results will require scrupulous attention to a number of substantial land-related risks. In the Senegalese context, depending on the location, particular challenges may revolve around (i) confirming with certainty existing rights to the land and the absence of disputes concerning those rights, and (ii) ensuring that all land users on a given piece of land (including tenants, sharecroppers, migrants, herders, women and other vulnerable members of the community) – and not community elites and rural community authorities alone – are consulted, protected and benefitted as land transactions are consummated.

10. As elaborated below, the project intends to address these challenges and risks in a number of ways. The project also aims to design test and refine good-practice approaches to due diligence in the ascertainment of existing rights, benefit sharing, transparent consultation and contract design.

III. Land Policy and Legal Framework

Overall context

11. Land management in Senegal occurs in a context characterized by “legal pluralism”, which combines elements of written law and oral customary rules. The formal regulatory framework is chiefly organized by the Law on *Domaine National* (1964)² and its implementing instruments (which were later supplemented by the Law on Administrative Reform of 1972 and the 1996 Law on Decentralization and rural Council’s Land Management Competences and related decrees³.)

12. The purpose of the Law on *Domaine National* was to provide Senegal with a unified framework for land management, based on the principle of enabling everyone to have access to land. However since its adoption, this law has given rise to considerable debate, and the law’s implementation was beset with difficulties, also due to the absence of accompanying and supporting measures. Key notions such as “land development” and “member of the Community” have never been clearly defined, and insufficient resources have been allocated to support the rural community Councils in charge of enforcing the instruments.

13. The Law on *Domaine National* converted all unregistered land into “Domaine National” and entrusted its management in rural areas to local elected officials at the level of the rural community. In order to promote optimal use of land resources, the legal mechanism provided for land assignment granting a permanent right of use on condition that the user of the land was a member of the rural community.

14. In the years that followed, this approach was reassessed, and as early as 1996 the Senegalese government commissioned a study focusing on how to liberalize land management with a view to stimulating private investment in agriculture. In the mid-1990s thought was also being given to land reform in the Senegal River Valley, focusing on capitalization of sizable investments in irrigation schemes, and reduction of conflicts between herders and farmers. In early 2000 another issue emerged, that of securing family farmlands, and, more recently, particularly since the food crises of 2008, the promotion of self-sufficiency and private investment (including to develop export) have been gaining attention. Although the 2004 Law on Agro-Sylvo-Pastoral Activities announced the preparation of policy changes, indicating that proposals for legislative reform would be submitted to Parliament within two

² Key texts on *Domaine National* are : *Loi 64-46 du 11 juin 1964 relative au Domaine national, Décret 64-573 du 30 juillet 1964, fixant les conditions d’application de la loi 64-46 du 11 juin 1964 relative au domaine national, Décret 72-1288 du 27 octobre 1972 relatif aux conditions d’affectation et de désaffectation des terres du Domaine National comprises dans les communautés rurales, modifié par les décrets 80-1051 du 14 octobre 1980 et 86-445 du 10 avril 1986, Loi 72-02 du 1^{er} février 1972 relative à l’organisation de l’administration territoriale, modifiée par les lois 96-10 de 22 mars 1996 et 2002-02 du 15 février 2002.*

³ *Loi n°96-07 du 22 mars 1996 portant transfert de compétences aux régions, aux communes et aux communautés rurales. Décret n°96-1130 du 27 décembre 1996 portant application de la loi de transfert de compétences aux régions, aux communes et aux communautés rurales en matière de gestion et d’utilisation du domaine privé de l’Etat, du domaine public et du domaine national.*

years of the Law's promulgation⁴ the current regulatory framework however remains based on the Law on *Domaine National* of 1964.

15. The 1964 Law on *Domaine National* essentially abrogated customary land tenure and categorized most of the land as *Domaine National*. The State became the exclusive trustee of this land and is responsible for its management. However, despite an extensive body of legislation on land tenure and on decentralization, customary rules regarding land are still widely applied in many rural areas. In such areas, rural Councils rarely make land allocations without the approval of customary chiefs. In areas that have been more recently developed, including the area around Lac de Guiers, the continued operation of customary rules is less pronounced, and customary chiefs are largely not present.

16. Additional tools have been developed in recent years in the region, such as the Land Occupation and Use Mapping (POAS) and the Irrigated Land Charter.

Land Occupation and Use Mapping (Plans d'Occupation et d'Affectation des Sols - POAS)

17. In the 1990s, tools were set in place in the Senegal River Valley to resolve principal local conflicts and allow the irrigation schemes to be used to their fullest extent. These tools are known as POAS (*Plans d'Occupation et d'Affectation des Sols*, or Land Occupation and Use Mapping) and the *Charte du Domaine Irrigué* (CDI, irrigated land charter). These land management tools were originally designed through a participatory approach to find ways to reduce conflict between farmers and herders. To achieve that goal the local people proposed zoning the territory, according to the types of activities that can be accommodated on a given piece of land (pastoral and agricultural areas, fishing areas etc.), sometimes also marked by signs in the field.

18. POAS are also a response to normative gaps and difficulties in management of natural resources (water, land etc.), and a mechanism for involving people in the selection and implementation of the rules for their sustainable use

19. Agricultural development supported by SSIAP will have to be designed in compliance with the relevant POAS. Project supported areas are expected to be located primarily in so-called ZAPAs (*Zones Agro-Pastorales à Priorité Agricole*) where it is up to farmers to prevent cattle from destroying crops and where livestock may be prohibited before the end of harvest, and possibly in ZAPEs (*Zones Agro-Pastorales à Priorité Elevage*) where agriculture is not prohibited but where pastoralists are not held responsible for damage to crops, and where livestock trails and land reserves for the expansion of villages are planned. POAS can facilitate new agricultural development in that they may contain information on existing rules and local arrangements for land user rights.

Irrigated Land Charter (Charte du Domaine Irrigué)

20. Disengagement of the State in the late 1980s and the commissioning of dams, contributed to a sharp increase in developed area through private initiative. This development had only

⁴ Art 23. *Loi d'Orientation Agro-Sylvo-Pastorale No. 2004-16 du 4 juin 2004 (JO No. No. 6176 du samedi 14 aout 2004)*

moderate outcomes in terms of rural development however, and resulted in the development of a so-called “traveling irrigated agriculture”, with little concern for sustainability of irrigated land. Various actors (local farmers, neo-rural, officials, businessmen, immigrants, foreign investors) became engaged in a race to acquire land through transactions not necessarily complying with the regulatory regime, which caused a profusion of basic irrigated perimeters without drainage developed on saline and / or sandy land. Funded through harvest credit, irrigated perimeters were abandoned after a few seasons due to the poor water management system and to sharp drop in soil fertility and yields. New allocations of land were easily obtained in other areas, only to repeat the same scenario.

21. The Irrigated Land Charter was enacted to mitigate the "travelling irrigated agriculture" risk and to improve the profitability and the sustainability of public and private investments. Basically, it is a local agreement setting out the commitments of all stakeholders involved in irrigated agriculture in the Senegal River Valley, formalized through a Prime Minister's decree (*arrêté primatorial*)⁵. The Charter mentions the conditions allowing the use of irrigated areas under both public and/or private property status. It determines, among other things, the requirements for obtaining land user rights, the requirement to submit a land development plan approved by SAED or by any other competent authority and the obligation to cultivate any allocated area in less than 5 years even if it is a private plot. Any land right holder in the irrigated area must also sign a statement that reiterates these duties, including the payment of a water usage fee to OMVS.

22. Agricultural development and any agreements between investors and rural communities under the project will necessarily have to respect the terms of the Irrigated Land Charter.

Current land tenure and land-use allocation procedures

23. Under the 1964 Law on *Domaine National*, there are three broad categories of land ownership in Senegal. These are (i) Private Lands (*Domaine Privé*), comprised of lands of which private ownership was registered within the timeframe provided for this purpose by the law; (ii) Public Lands (*Domaine Public*); and (iii) *Domaine National*. *Domaine National* comprises all land that does not fall under the other two categories.

24. With the Law on *Domaine National* a decentralized land management system was set in place, and the rural Councils of the rural communities were given the power of land-use allocation of all land within the *Domaine National*. The rural Councils were not empowered to grant real rights, but rather a right of use tied to land development.

25. The rural communities are the fourth-level administrative divisions in Senegal. They were instituted by the law No. 72.25 on 19 April 1972, and are administrative subdivisions of the State, comprising the villages, and distinct from the urban communes and municipalities concerning towns, medium or large⁶. Rural communities provide a reasonably representative

⁵ Arrêté primatorial du 25 juillet 2007 portant Charte du Domaine Irrigué de la Vallée du Fleuve Sénégal

⁶ Senegal is divided into 14 administrative regions, each headed by a governor appointed by and responsible to the President. The law on [decentralization](#), which came into effect in January 1998, distributed significant central government authority to regional

framework. Presidents of rural communities are elected officials and the legal framework on land and decentralization provides a reasonably inclusive and transparent land allocation process.

26. The legislative framework provides administrative appeal mechanisms and recourse to the Supreme Court for abuse of power⁷. The system is supported by a number of tools such as the land registry book and the rural Council deliberations' book. The 1964 Law on *Domaine National* requires that a land registry book is kept in two copies; one by the President of the Council, the other to be kept by the *Sous-préfet*. In practice however, registers are often incomplete, unavailable locally or non-existent, and hence in most communities make limited or no contribution to security and transparency of tenure⁸.

27. At first glance, the legal framework in Senegal will facilitate the Project design. *Domaine National*, which comprises almost 80 percent of land in the country, is State Property, and rural communities have the power to grant user rights to this land. Taking advantage of their jurisdiction over *Domaine National*, rural communities have in several cases already entered into agreements directly with investors in various parts of Senegal.

28. On closer examination, however, it turns out that the legal basis for this approach is weak at best. Under the 1964 Law, Rural communities can issue user rights only to community members. There does not appear to be a legal basis for outside investors to be considered "community members," hence there is no clear basis for Community-Investor land transactions. Instead, land can be made available for lease to investors by converting land in the *Domaine National*, currently under the control of a rural community, to *Domaine Privé de l'Etat*, administered under the control of the Central Government.

29. Practice shows that investors are themselves aware that rural communities are not legally empowered to give them legally secure leases on land categorized as *Domaine national*. While investors typically begin their involvement in a particular locality by reaching agreements with communities, they often later seek to formalize these agreements by asking the Central Government to convert the land from *Domaine National* to *Domaine Privé de l'État*. The Central Government is then in a position to give a formal lease to the investor. Thus there is a risk to unintentionally promote an extension of land deals between investors and the State at central level, which would lead to a progressive loss of farmland now under the control of rural communities. In order to address these concerns, the Government of Senegal proposes to employ an innovative approach in the project area. Essentially, the approach is based on a land rental contract between the investor and the rural community under a long term land lease between the rural community and the Government.

assemblies. The 14 administrative [regions of Senegal](#) are subdivided into 45 [departments](#) and 103 arrondissements (neither of which have administrative functions) and by collectivités locales (the 14 régions, 110 communes, and about 340 communautés rurales) which elect administrative officers.

⁷ Loi No. 64-64 du 17 Juin 1964; Décret No. 72-1288 du 27 Octobre 1972.

⁸ See for ex. J. Lestang, rural Land Management in the Senegal River Valley, p. 11 (World Bank Annual Conference on Land and Poverty 2012).

IV. Land tenure issues arising in the Project Area: Senegal River Valley

Regional context

30. The project aims to help local communities identify around 10,000 hectares of land (20 lots averaging 500 hectares each) that the communities may choose to make available to private investors and medium-scale farmers (or water users associations of small-holders) (about 5,000 in the Ngalam Valley and 5,000 around Lac de Guiers).

31. Around the Lac de Guiers and in the Ngalam area, pressure on land resources is relatively low. Housing and cultivated areas are concentrated in the area bordering the lake along a 1 km strip. New agriculture developments are possible if resources are mobilized to develop irrigation from 1 to 3 km from the water shores.

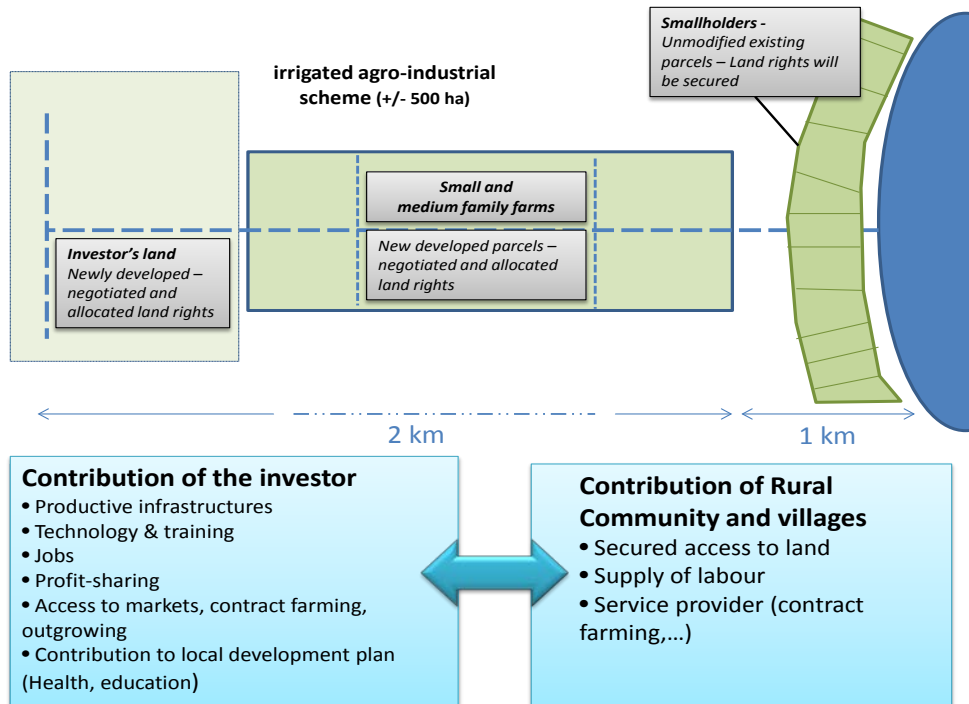
32. Recent experience with investment in these areas has revealed a number of problems and poor practices that the project will attempt to address through application of the principles and mechanisms described below. A number of investors have set up horticulture commercial agriculture facilities with limited success. Most received land allocations from the rural communities, sometimes receiving thousands of hectares, but have not carried through with development of the entire surface. On the eastern shore of the lake, the poor track record of large land allocations and, sometimes, contentious allocation procedures have caused conflicts, which make the area less attractive for new investors. Land allocations, often overlapping, were so large that they exceed the total area of the rural community. Some investment projects were abandoned because of this extremely confrontational context.

33. Taking in account these poor experiences, some investors have managed to acquire land by driving their own negotiating processes with rural communities, and are developing business models that are beneficial to both their ventures and to the local communities. These experiences arguably have a weak foundation in the current law. Nevertheless, they are already implemented and tested by stakeholders and provide evidence for the relevance of the land and water management business model that is being pursued by the project.

Box 1 - The example of Ngnith and West Africa Farms

The agreement (illustrated below) between the rural Community of Ngnith and West Africa Farms (a British company, run by a South African manager), is based on land allocation by the rural Community of Ngnith. West Africa Farms has developed the land for irrigation and assigned almost half of the allocated parcel to the smallholders having previous land use rights on it. A partnership contract clarifies the duties of each party, namely- for the investor- the investment in primary water infrastructure, the provision of technology and technical training for smallholders and the creation jobs for the population around his farm; for the local farmers – the opportunity to be involved in the capital of the company and a contribution to the Local Development Plan of rural communities by funding social (classrooms, local health center, etc.) and economic investments (roads, small water works, etc.). West Africa Farms and the rural Community of Ngnith provide a promising example of inclusive agribusiness agreement based on a legal framework that still needs to be improved. This shows the need to support local stakeholders for establishing reliable and officially recognized agreements.

Inclusive Agribusiness Model



Summary of Issues Arising

34. From the above account of the legal framework and of consultations and assessments conducted during project preparation, a number of key issues emerge that need to be diligently and appropriately managed during project implementation. The list that follows also reflects work from development partners such as the Millennium Challenge Corporation, as well as key insights from work done by the Bank and others concerning the recent trend of increasing international interest in agricultural land in Africa and other developing countries.

35. ***Identifying the full range of rights and uses affecting land.*** Alternative methods of land allocation, although not formally recognized by law, are sometimes tolerated due to their usefulness in developing parcels: rental, loan security, land loans, share cropping etc. In the customary sector, a complex array of interests may exist. These subsidiary rights are usually not documented and as a result, investors may learn about existing land uses only when they try to take possession of the land. These need to be taken into account to ensure that efforts to make land available for investment projects and to adjust existing holdings do not undermine current or future livelihood opportunities for local people.

36. ***Ensuring meaningful negotiations between communities and investors, leading to clear and enforceable contracts.*** Communities and their leaders may lack capacity to negotiate with sophisticated investors or to realistically ascertain and seek to realize the true value of the assets they are transferring; and that contracts can be difficult to monitor and enforce.

37. ***Bridging the gap between rules and practices in the land allocation procedures*** – field observations show a gap between the legal framework for land and its implementation by rural communities, which may affect certainty and security of land rights and the sustainability of investments. Partly due to lack of capacity, only a portion of the user rights on *Domaine National* of Senegal are registered.

38. ***Land allocation procedures remain to be further detailed*** – rural communities officials are not bound by any time limit for the procedure of allocating land. It has also been noted that applications for land allocations are not systematically taken into account. The poorly defined concept of land development (so called “*mise en valeur*”) also remains to be detailed. All these issues may cause excessive delays. At the same time, procedures to enhance the protection of local rights and interests, and to ensure environmentally sound development, are under-developed.

39. ***Land allocation without mapping reference*** – The risk of overlapping land allocations is obvious if the boundaries of parcels are not reported on a mapping document and in an accurate manner. One of the key activities supported by the project on land rights management will focus on the implementation of a land right mapping at the rural communities level using ICT and crowd-sourcing land data bases.

40. ***Land taxation and benefit sharing*** – to the extent that investors obtain use of land, it would seem reasonable that they be asked to pay a land tax. The project will promote the development of social agreements between rural communities and investors, to help ensure that investment results in significant and sustained benefits for local people. A binding

contract between investors and rural communities will aim to ensure contributions to local development by the investor, which could also help establish over time a relationship of mutual trust and benefit.

V. Project framework for engagement on land

Guiding Principles

41. **First, the project proposes to use a bottom-up process** focusing on building the capacity of rural communities and villages to manage and offer land rather than engaging in a top-down process with varying levels of consultation. The challenge is to provide the preconditions for securing land use rights over time, both for investors and smallholders, allowing the implementation of a mutual beneficial partnership.

42. The project plans to fund consultancy services that will support the land management process by rural communities throughout the life of the project. The consultant team will assist rural communities in the selection of small, medium and large private investors by giving to each party a negotiation framework that covers all aspects of the transaction between investors and rural communities. The project will sponsor a legal assistance service to facilitate the contract formalization and support dispute resolution mechanisms.

43. **Second, application of OP 4.12.** The World Bank's Operational Policy on Involuntary Resettlement, OP 4.12 will apply to assembling of tracts of land for investments supported or facilitated by the project. This means that the project RPF will provide the framework for addressing impacts and benefits for local people who may be required to relocate their residences, their farming or grazing activities and their access to common resources. OP 4.12 will be considered to apply even though the rural community agrees to the transfer of land use rights as a voluntary transaction. Given the various possible types of land use and potential land rights holders in a given piece of land, it will be difficult for the project to ascertain that what the rural community characterizes as a voluntary transaction does in fact represent an informed and voluntary choice on the part of all people in the community whose land rights may be affected.

44. There exists in such situations the risk of elite capture and coercion of choices. Hence the importance of having the RPF as a tool to ensure that the procedural and substantive rights of local people are appropriately addressed. Private sector parties whose investment in land is supported by the project will, as a condition of such support, be required to apply and comply with this RPF. A minimum principle will be that no person will be required or asked to relinquish land that they are currently using to accommodate an investment or associated activities (such as the establishment of associated infrastructure or land development for preparation of smallholder plots) without being provided secure tenure over alternative land of at least equivalent quality or provided other acceptable compensation and assistance consistent with OP 4.12 and the RPF, including support for livelihood restoration.

Two characteristics of the project approach should be noted that are well-synchronized with the principles underlying OP 4.12 . First, it is expected that rural communities will identify land for investment that is relatively unused or undisputed, hence avoiding the need for

extensive relocation of existing rights and uses from the outset. Second, land transactions will be in the form of negotiated agreements between investors and rural communities, and will be seek to ensure accepted investment models include significant benefits for local communities (including opportunities to be incorporated into the investment as outgrowers or beneficiaries of smallholdings), with the expectation that the resulting benefit packages (both for communities and individual displaced farmers) will represent appropriate support for restoring or enhancing livelihoods as stipulated by OP 4.12.

45. **Third, land rights/land use inventory and participatory planning.** Project supported investments will need to be preceded by a careful ascertainment of the existing rights in a proposed area. This should be accompanied by ascertainment and, if possible, documentation of existing rights and uses, including those of tenants and vulnerable groups. Uses of common property resources should be ascertained and mapped, as often the perception that certain land areas are “unutilized” arises from a failure to recognize local uses of such areas that are important for livelihoods. Flowing from such an inventory, a facilitated process of participatory planning will take place, involving all levels of the community, to help communities themselves define areas available for investment, to determine values of land, crops and other assets and to assess potential impacts on livelihoods. Considerable experience has been gained in a number of pilots in the utilization of low-cost and culturally-appropriate technologies to map and document customary rights and in carrying out participatory processes of rights ascertainment and community-level planning.

46. Action to strengthen capacities of rural communities and professionalization of their land management activities should improve the land management service delivery. The project will leverage and extend the technical assistance being provided through the PACR project (funded by the French Development Agency) to help rural communities develop detailed inventories of user rights and design local master plans for future development. Such a process started during project preparation and is expected to lead to the creation of a continuously updated consolidated database of land available for private investors and medium-size farmers or water user associations of small-holders. In a number of project rural communities, the mapping and inventory already completed with PACR support will be sufficient, subject to validation and updating as may be required.

47. **Fourth, addressing legal ambiguities or disputes affecting targeted land.** The project will not support (nor are private sector partners likely to be interested in) investments on land for which there are significant ambiguities concerning user rights or ownership, including disputes within communities between different claimants, boundary disputes, disputes between rural communities and higher levels of government, or persisting complaints stemming from prior *Domaine National* acquisitions or previous investments. Following on from the process outlined in the preceding paragraph, the project will support a process of identifying and analyzing such ambiguities and disputes, and will deploy tailored mechanisms designed to help the parties reach legally robust and socially acceptable solutions.

48. **Fifth, consultation, negotiation and benefit sharing.** Transparent and inclusive consultation will be essential, both *between* communities, the government and prospective investors, and *within* communities themselves (to ensure that the implications of proposed allocations of community land are both understood and accepted by the community at large,

that benefits are equitably targeted and that risks of elite capture are mitigated). First, local communities (both at rural community and village levels) need to be fully consulted with regarding all the implications of the proposed land transaction through a village consultation process acceptable to the Bank. In addition to the overall process, no specific land transaction will be supported if communities did not give its explicit approval following the agreed process.

49. There also is the risk that leases payments and other benefits may be negotiated exclusively between community leaders sidelining community members including users of land. Several actions that contribute to an enabling environment for benefit sharing are being promoted under the project (for example, transparency of contract payments) as well as support to communities to build their capacity to engage with investors (negotiation support, legal literacy and enhanced understanding of legal rights and processes and economic analysis, etc.). The project will also provide support to monitoring and documentation of consultations.

50. **Sixth, land investment contracts.** The results of consultations and the elements of any finalized negotiation for project-supported investments need to be reflected in a legally sound and enforceable contract between investors and rural communities, articulating clearly the rights and responsibilities of the parties, and defining in clear and unambiguous terms any agreed-upon benefit sharing arrangements. Technical assistance will be provided to help rural communities negotiate with private investors to maximize their economic and social contributions (e.g. financing of secondary irrigation infrastructure and access roads which will benefit smallholders, access to markets, skill transfer, employment, linkages with smallholders, contributions to local development plans, profit sharing arrangements with rural communities, etc.). Support will be provided to help rural communities manage their land and water in a sustainable way. Finally, this technical assistance will entail monitoring the implementation and outcomes of the contracts between rural communities and investors, as well as the provision of a dispute resolution mechanism.

51. **Seventh, land support to smallholders.** Project principles of engagement with landowners and investors will require that participating smallholders (whether operating on land they already possess or on new parcels created in connection with the investment) either are allocated or already have documented rights to the land they are using. A transparent and equitable process for allocation of irrigated smallholder plots within project areas will be designed.

52. **Eighth, strengthen a sustainable land management capacity of rural communities.** The project will provide comprehensive support to secure land rights, not only for the investors but also for any members of the rural community, by supporting a local land management office in each targeted rural community and by providing land mapping and registration tools and training as well as by providing land use certificates in compliance with the current legal framework on *Domaine National*.

53. Although SSIAP will develop solutions which should work within the current legal framework, the project will pilot and evaluate approaches (e.g. evolving land use rights into tradable leases) which could inform the national land policy and possible land reform.

Land Allocation Model

54. Project design anticipates that rural communities themselves will make land allocation decisions in a participatory way and will be the beneficiaries of agreements with investors. However, current law does not allow leasing of *Domaine National* by rural communities directly to investors. Only the Central Government can lease such land, after first converting it to *Domaine Privé de l'Etat*.

55. To address these concerns, the Government, after considering various options, proposes to structure deals as **leases of *Domaine Privé de l'Etat* back to rural communities, who then will sub-lease the land to private investors**. The Central Government would convert identified *Domaine National* to *Domaine privé de l'État*. This procedure is allowed only for public interest⁹. The public institution in charge of land administration (DGID) would lease this land (*bail emphytéotique*) to the rural community, which in turn would rent the land to the investor. The lease of *Domaine Privé de l'Etat* back to rural communities is in compliance with the current legislation. The law No 76-66, July 2nd 1976 and the law No 96-07, March 22nd, 1996, provide a legal framework that allows long term land leases from the Government to rural communities¹⁰.

56. This approach represents an improvement over current practice in that it would squarely operate within the parameters of the law. It also represents an important move towards ensuring that rural communities remain partners in investment deals, rather than passive bystanders. It helps rural communities to have a legal standing to hold investors accountable and to negotiate a benefits package.

57. There remain some risks with this approach, including the fact that there has been little experience with it in Senegal up till now. The approach is considered a step in the right direction by Government and the communities with whom it has consulted. At the same time it is recognized that it is not a “perfect” solution, and Government is committed under the umbrella of sub-component 1.3 of the project to work with Communities and civil society to work towards better long-term solutions. Risks include:

- This approach may be perceived as promoting the “centralization” of land rights, because the Government will need to convert the land to *Domaine privé de l'État* before it can be leased back to the community and thereafter sub-leased to the investor. It is not clear under current law whether there is a legal mechanism to reverse this conversion once it has happened. This could thus result in the permanent removal of such land from *Domaine National* and limit future management rights of rural communities over the land

⁹ Loi 64-46 du 11 juin 1964 relative au Domaine national : « *Les terres du domaine national ne peuvent être immatriculées qu'au nom de l'État. (art 3). L'État ne peut requérir l'immatriculation des terres du domaine national constituant des terroirs [...] que pour la réalisation d'opérations déclarées d'utilité publique (art 13)* ».

¹⁰ Loi 76-66 du 2 juillet 1976 portant Code du domaine de l'État, art. 51 : « *L'État peut faire apport à une personne morale de droit privé soit d'un droit au bail, soit d'un droit de superficie, soit d'un droit de propriété constitué sur son domaine privé immobilier. L'État peut également transférer les mêmes droits à des personnes morales de droit public* ». Loi 96-07 du 22 mars 1996 portant transfert de compétences aux régions aux communes et aux communautés rurales, Art 18 & 19 : « *L'État peut céder aux collectivités locales tout ou partie de ses biens meubles ou immeubles relevant de son domaine privé ou passer avec ces collectivités des conventions portant sur l'utilisation desdits biens. L'Etat peut [...] faciliter aux collectivités locales soit l'accès à la pleine propriété, soit [...] le droit d'usage [...]* ».

if the investment fails or is terminated. To address this, the Government is committed, first, to ensure that land for investment in project areas is only converted once identified and agreed by the Rural Community and the investor in accordance with the steps laid out in the next section. Second, where investments do not go forward or fail, and as a result the land is not used as anticipated, the Government will restore the land to community control if allowed under law, or if not, ensure that subsequent allocations of the land is made with informed community consent and using the principles and processes set forth in this Annex.

- The lease (*bail emphyteotique*) between the central Government and the Rural Community could be terminated by the central state, for reasons that may be disputed by the Rural Community. To help address this risk the Government will commit not to terminate the bail emphytéotique arbitrarily or otherwise than in accordance with clear conditions set forth in the lease document

Proposed Sequencing

58. Following field visits and meetings with rural communities and local authorities, the design of the following model was discussed with the partners of the project (Steering Committee, PDMAS, rural communities), who agreed to an 8-step approach, which will be subject to further fine-tuning in the early stages of project implementation, and thereafter in light of lessons learned from project-supported investments:

Preliminary step: Land offers by rural communities and villages

59. Rural communities will be in charge of the pre-identification of parcels (between 300 and 700 ha) that they consider suitable for private investment. The objective of this preliminary phase is to take advantage of the detailed knowledge of rural communities about their land in order to get a first assessment of the available land stock. During this preliminary phase, attention will be paid to adopting an adequate communication strategy with local populations to inform them about the project's direction and their expected involvement. Information meetings will be organized around the Lac de Guiers and Ngalam area to explain the project approach. Meetings will be focused on the criteria that could be used to decide on the land to be allocated and developed, including soil quality, location and size and the benefits (infrastructure, jobs, contract farming opportunities) that rural communities may get from appropriate investment and through project support.

60. Heads of rural communities will be invited to visit and assess by themselves the model described above and developed by the rural community of Ngnith and the West Africa Farms company.

61. The procedures for land pre-identification will be introduced and discussed with villages and rural communities during an initial working session. The team in charge of this process will design a framework including the following criteria: three to five assignable blocks of 300 to 700 ha each, located at 1 to 3 km from a water source (e.g. Lac de Guiers or Ngalam), with a significant percentage of arable land, without any serious land conflicts. The rural communities will then be responsible for identifying assignable land in accordance with this framework.

62. Rural communities will be asked to undertake consultations at the village level and to report findings in official minutes. These will provide written documentation to verify the effectiveness of the consultations at the village level, the geographical location of the parcels, their legal status, their current occupation and existing rights.

63. The duration of this preliminary phase is estimated at 2 months. It will end with a public meeting for submission of land offers to be presented by each rural community, in the presence of the project preparation Technical Committee and all participating rural communities.

Step 1: Preliminary validation of land offers

64. The technical assistance services hired to implement this approach, with APIX and SAED, will visit each of the concerned villages, and will check the effectiveness of the consultation, based on the minutes of the meetings held by rural communities at the village level.

65. The team will conduct an analysis of the land tenure background, and will assess the compatibility of each land offer with existing or ongoing land allocations and the POAS. It will support the rural communities whose land offers remain unfinished.

66. As land allocation for private investment may increase the pressure on common resources, the project will check that each targeted project area is in compliance with the POAS (*Land occupation and use mapping*). POAS proceed in a consultative manner to a zoning of the territory of the community by distinguishing different vocations (pastoral and agricultural areas, fishing areas) to be reported on a map and any agricultural development supported by the project will have to be designed in compliance with POAS. If needed, the project will help the rural communities update their POAS to ensure that they take into account the future needs of the growing economy and population.

Step 2: Feasibility studies with multi-criteria evaluation, and activities to support land management capabilities of rural communities

67. This step consists in a feasibility study on the parcels - validated through step 1 - by the consultant team. Four outputs are expected:

- a multi-criteria evaluation of the land offers in economic (distance to water, roads, energy sources) and agriculture terms (soil potential, cultivation prospects). The feasibility study should present models of irrigation systems in each parcel including for small and medium-sized farms.
- a comprehensive and participatory land use rights inventory and a GPS survey of parcel boundaries will be made to complement the survey work already done by PACR and MCA for some rural communities. This land rights inventory (including breeders' rights) will help to determine the need to develop and consult on a possible RAP and implement such a RAP before any user or other rights are affected. This evaluation will also assess social and environmental impacts. It will check that the proposed land parcels are not in protected areas or fall within a specific environmental status;

- an indicative set of technical recommendations to guide future development and a land allocation scheme between large investors, medium and small producers in each parcel;
- a baseline measurement in order to have initial data and measure the expected effects on additional incomes for farmers, agricultural production (in quantity and value) and on new cultivated areas.

68. During this phase, content and cost of activities that are needed to strengthen the capacity of rural communities in terms of sustainable land management will be designed. The project will provide a comprehensive support to secure land rights, not only for investors but also for smallholders, by establishing a local land management office in each targeted rural community and by providing land mapping and registration tools and training as well as by providing land use certificates. These activities will focus on the implementation of a local land management unit equipped with satellite images and ICT tools to gradually register the land rights within each rural community. This design work will leverage the experiences of ongoing programs such as MCA and PACR.

Step 4: Preparation of key documentation for the call for expressions of interest for agricultural investment projects

69. Calls for expression of interest for agricultural investment projects will include two key documents:

- First, an information package will be prepared. It will include a presentation of the strengths of Senegal in horticulture, a presentation of Lake Guiers and Ngalam area, an overview of successful agribusiness implementations in this region and a technical description of the lands to be allocated with their location. This package will also present the incentives provided by the project in terms of basic infrastructure and matching grants.
- Second, a framework partnership agreement between rural communities and investors will be attached to allow investors a first assessment of the expected level of responsibilities. This framework agreement will be negotiated with the rural community and will include key points on which both parts will be brought to agree, in accordance with social and environmental standards in force. These include (but will not be limited to) the objective of the contract, contract duration and termination provisions, benefit sharing and other social and environmental obligations of the investor, responsibilities of the rural community, and dispute resolution mechanisms.

70. APIX will be responsible for this activity with the support of the consultant team.

Step 4: Marketing to potential investors

71. Senegal's attractiveness and availability of land to be developed will be widely advertised.

72. A proactive approach will be undertaken for potential strategic investors including domestic investors (SMEs specialized in horticulture in the Niayes, importers listed by APIX) and international investors, including those who have experience with horticulture in Africa.

73. During this phase, field trips will be organized to visit offered parcels as well as rural communities and agribusiness companies that have already established investments. An Investor Conference will be arranged.

74. APIX will be responsible for this activity with the support of the consultant team.

Step 5: Call for projects and selection

75. The call for projects will be the responsibility of APIX with the support of the consultant firm. Project selection will be the responsibility of the rural communities supported by the Technical Committee and the technical assistance team.

76. A call for investment projects will be launched over a period of about three months. During the three months given to investors to submit projects, the second phase of land identification –the 15 remaining parcels- will be launched at this time and will benefit from lessons learned from the first phase.

Step 6: Feasibility studies for infrastructure investments

77. Feasibility studies will be prepared during this phase to design infrastructures based on the outcome of investor selection process. Options to complete investments made by investors to deliver services to a wider community will be strongly supported.

78. This step will be the responsibility of the consultant firm.

Step 7: Negotiations and land allocation

79. The final negotiations and the signing of the partnership agreements between investors and rural communities will occur during this phase.

80. Once the partnership agreements between investors and rural communities is approved and once people have been properly compensated etc. as needed under the RAP, the administrative procedures regarding the land allocation may be launched.

81. The land allocation process requires three steps:

- i. **conversion** from *Domaine National* to *Domaine Privé de l'Etat*;
- ii. **long term land lease** established between DGID and rural communities;
- iii. **rental contract**: as soon as the rural community gets an official lease from the central level, the land rental contract between the rural community and the private company may be signed.

The project will help the process by providing any required means. This critical step will be the responsibility of the DGID and the rural communities with the support of the technical assistance team.

82. The consulting team will help the rural community land management office monitor the agreement effectiveness and to facilitate obtaining various approvals and will ensure online publication of land allocation decisions by rural communities as a means to improve transparency and accountability.

83. Requests for support by the project to achieve the specifications within partnership agreements will be validated. Land allocations once signed and approved by the competent authorities will trigger the implementation of supports previously planned. They will focus on development works for irrigation, on land rights management, on training programs and on social investments identified by the rural communities as part of their Local Development Plans.

84. The contractual agreement between the rural communities and the investors will spell-out the conditions of exit, whether it is because the investor did not fulfill its obligations, or because he went bankrupt or because he wishes to exit. The project will support a dispute resolution mechanism to help with the applications of these contractual clauses.

85. Legal assistance service will be provided through consultancy services to the rural community land management office to enable the contract finalization and enforcement.

86. This step will be the responsibility of the rural communities with the support of the DGID and the consultant team.

Step 8: Monitoring & Evaluation

87. This final step consists in the implementation of a legal assistance service that could be mobilized at any time, particularly in the cases of a breach of the partnership agreement. This service will operate throughout the life of the project, and options will be explored to help ensure its sustainability thereafter.

88. During this phase a program to support and advise the rural communities land management activities and to establish local land units (including equipment and training) will be implemented.

89. Finally, the monitoring and evaluation arrangement will be supported to measure performance and impacts of both project and private operator investments. This evaluation work will feed any thinking and strategy design to be conducted by the National Committee for the Land Reform.

90. This step will be the responsibility of APIX with the support of the Technical Committee and the consultant team. Research institutions will be hired to support them for any evaluation activities.

91. The institution in charge of the relationship with the rural communities in negotiating land is yet to be identified. Either the extension of the mandate of an existing agency or

alternatively, the creation of a specific agency for promoting and securing access to land (solution with consequences in terms of costs and sustainability) should be considered.

Preliminary consultations

92. Preliminary consultations with local communities were conducted through a village consultation process. During project appraisal a comprehensive and well-planned consultation process was deemed critical for achieving the objectives of the project, as the project relies on an open, inclusive, and participatory approach. For these purposes a three phased consultation program is being carried out by the Government of Senegal to inform and engage rural communities, and at the level of village representatives enable them to express their views throughout the process.

93. During the first phase (November 28 – December 13 2012 and February 25 – March 1, 2013) informative sessions have been organized in 41 villages corresponding to the 9 rural communities where the project is expected to be implemented. The objectives of this phase were to: a) share the project approach (PDO, components, etc.) with local stakeholders; b) gather their opinions and recommendations; and c) agree on the modalities of the consultation process (agenda of next phases, selection of village representatives, etc.).

94. The Government of Senegal initiated the second round of consultations with a meeting with civil society representatives in Dakar (June 5) and a workshop in Saint Louis (June 28 - July 3) with village representatives including representatives of youth and women groups. This workshop has been as an opportunity to inform village representatives about the options identified by the Government for providing land use rights to investors within the current legal framework (“the land note”) and at same time, listen to their concerns and allow them to convey this information to their village, discuss it within the village and then report back to the central government.

95. The third round of the consultations was completed on September 16, 2013. The aim was to ensure that the project objectives and approach, and namely the land note, are validated by the villages population. It aimed to record the final position of the local communities on the project overall and the proposed land allocation approach. In addition to group consultations, a survey was conducted at the individual level in the project area. All nine Rural Communities targeted by the project were represented at the wrap-up meeting. The conclusions of the consultations were very positive, as all targeted rural communities and villages confirmed their full support to the project. All the participants welcomed the extensive consultations. Furthermore, the individual survey results indicate that 98% of the surveyed villagers reported their agreement to the project. However, the communities raised a few key issues which need to be addressed as we move forward with the project. These include: (i) the land sharing ratio between local communities and private operators, and (ii) arrangements for the development of irrigation perimeters, taking in account water ways based on existing livestock activities. These points were discussed and it was confirmed that there would be an integral part of the implementation phase through a continuous participatory approach where communities would decide themselves on best feasible options.

Annex 7: Details of the Financial and Economic Analyses

REPUBLIC OF SENEGAL: Sustainable and Inclusive Agribusiness Development Project

1. This project aims to support job creation through a sustainable and inclusive agriculture and land management. It will support local rural communities through technical assistance, as well as investments in secondary and tertiary irrigation infrastructure. It also includes technical assistance to small-scale farmers, farmer associations, SMEs, and agriculture business associations, in particular through the provision of vocational training and applied research. The project will also contribute to the financing of critical public infrastructure in the Ngalam Valley and around Lac de Guiers. Finally, it includes support to the rehabilitation of the Agropole and the land reform process.
2. An economic and financial analysis was undertaken in order to assess the impact of the project's proposed intervention, and the expected financial benefits for the different beneficiaries. The analysis takes into account the estimated incremental benefits and costs of the project-related investments. A 10 percent per year discount rate was assumed as it reflects the opportunity cost of capital in Senegal and the period was set at 10 years. All prices are expressed in constant prices with an exchange rate fixed at US\$ 1.00 = 500 FCFA.
3. Different assumptions and detailed data from multiple sources are used for the analysis of specific components. The analysis is based on various sources of data, including: (i) preliminary studies commissioned by the Ministry of Agriculture in 2009 – which included an assessment of the type of agribusinesses, the cropped products in the area, export potential, data on irrigation investments and maintenance; (ii) technical, economic and financial data from the PDMAS, including farm budgets of on-going projects in the area; (iii) data from industries; and (iv) data collected on the field.
4. The total investment is estimated to result in a NPV of US\$46 million and an ERR of 18 percent. The reference scenario is rather conservative. Other scenarios are presented at the end of this Annex.

Assumptions

5. The project will develop 10,000 hectares of irrigated land. To simplify the economic and financial analysis, we assume 20 blocks of 500 hectares, each shared between an investor and local farmers (small and medium), as follows: 250 ha for the investor, 150 ha for medium farmers (with an average surface area of 16 ha) and 100 ha for small farmers (with an average surface area of 2.5 ha).
6. The economic and financial analysis focuses on the block-level first and more specifically on the net margin and profits of each stakeholder within one block. The irrigation for the Ngalam Valley supposes the construction of a large infrastructure, such as a canal, which will be entirely financed by the project (Component 2.1. US\$23 million). We then assume the following costs:
 - The cost of the “secondary infrastructure“(e.g. secondary irrigation, access roads, fences, storage space and electricity connections) is estimated at about US\$7 000 per hectare. In addition to the costs of its own installation, the investor will also partly

- finance the infrastructure for the remaining 200 hectares. Overall, 75 percent of this infrastructure will be financed by the private sector. The remaining 25 percent is supported by the project.
- The cost of the “tertiary infrastructure” (e.g. irrigation equipment, land preparation) is evaluated between US\$3,500 - 5,000 depending on the irrigation system. Large investors are expected to finance 100 percent of their tertiary irrigation. Given the limited financing capacity of SMEs and smallholders (as experienced by the PDMAS project), the project will finance 50 percent of the tertiary irrigation for the SMEs and 80 percent for the smallholders inside the perimeters. It will also pay for 50 percent of the inputs for smallholders the first year, 30 percent the second year and 15 percent the third year.

7. The land distribution is a strong assumption of the economic and financial analysis. A 60/40 distribution (rather than a 50/50 distribution) has been considered. Given a constant envelope of 1.9 million per block, a 60/40 distribution will result in a lower internal rate of return for large investors and in a higher contribution of the project to tertiary irrigation, namely 50 percent for medium farmers and 80 percent for small farmers.

8. The project will also encourage entrepreneurs to enter in innovative upstream activities along the agricultural value chain (packing, bulking center, farming equipment retailers, farming equipment manufacturers, irrigation equipment manufacturers, maintenance providers). Some examples in Africa such as the floriculture in Zambia or the pineapple industry in Ghana highlight the importance of vertical integration in the value chain efficiency¹¹. Senegal is no exception, since poor marketing and lack of commercialization are currently resulting in substantial losses and lower selling prices on local markets for small and medium farmers, as well as high inputs costs. We then assume that this sub-component will enable the creation of ancillary businesses (from logistics to maintenance), thereby contributing to lower indirect costs (15 percent reduction for logistics costs in our estimation).

9. Two main sustainable land management practices will be considered for both project areas: methods for soil fertility and methods to prevent land degradation. For the purpose of the analysis, we assume that the economic benefits of such practices lie in the combined effect of increased crop production and decreased financial resources needed for purchasing fertilizers¹². After a few years, farmers will pay for 70 percent of the cost of fertilizers they would have paid without SLM practices.

10. We assume that investors will plant two crops, sweet potato and sweet corn. Small and medium farmers will plant sweet potato and onions. These crops are representative of the existing markets: sweet corn only for exports, onions only for the domestic market, and sweet potatoes for both domestic and export markets. Besides, sweet potatoes can be sourced from smallholders in contract farming. These three crops have different growing seasons that enable two harvests per year.

¹¹ See this report for extensive literature on value chains in agriculture: Webber M. and Labaste P. (20)

¹² Liniger, H.P., R. Mekdaschi, C. Hauert and M. Gurtner (2011), Sustainable Land Management in Practice -Guidelines and Best Practices for Sub-Saharan Africa. TerrAfrica, World Overview of Conservation Approaches and Technologies (WOCAT) and Food and Agriculture Organization of the United Nations (FAO).

11. We assume a rather conservative level for prices: white sweet potato (variety for exports) at 370 FCFA/kg, the red sweet potato (variety for domestic market) at 105 FCFA/kg, onion at 315 FCFA/kg (only for the domestic market), sweet corn at 260 FCFA/kg (only for exports). For instance, the prices of onion in July and August 2012 fluctuated between 300 FCFA/kg to 600 FCFA/kg by region. Selling prices for local products may be lower than the prices of imported products because of a poor quality (average of 437 FCFA/kg in August compared to 508 FCFA/kg for imported onions). In improving logistics for small and medium farmers and building warehouses, this project can contribute to higher competitiveness of local products and thus higher selling prices.

12. Various business models may be considered within or across the blocks. First, the country has a long experience in contract farming¹³ though not all crops are well suited for this model. Most fruit and fresh vegetables generate a high premium for improved quality and are thus good crops to grow in an outgrower scheme¹⁴. Smallholders take benefit from this arrangement by having a secured access to market with their produce being bought by the large company at a pre-determine price (better access to market and stable prices). In addition, they may have access to the high-value export market with higher prices¹⁵. Exports crops are usually fresh vegetables that can be planted outside the growing season for domestic crops. Then, a farmer in contractual arrangements with an investor have a secure income from agricultural production that may then be re-invested in another crop, thereby increasing substantially his revenue. In the baseline scenario, it is assumed that half of the blocks are in contract farming.

Timeline for crops

		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Domestic	Potato												
	Onion												
	Sweet Potato												
Exports	Green Beans												
	Melon												
	Sweet corn												

Source: « Etude du schéma directeur d'aménagement agricole de la zone du Lac de Guiers », 2009

13. In addition, a farmer in contract farming may benefit from extension information resulting in an overall agricultural production¹⁶. Overall, contract farmers have higher incomes than independent farmers (Graph 1). This assumption will be further investigated in the project lifetime through a rigorous impact evaluation.

¹³ Indeed 52 percent of exported green beans and 100 percent of cherry tomatoes are sourced from local smallholders in contract farming. Contract farming in tomatoes industries, such as SOCAS, is widely adopted, and involved around 12,000 farmers.

¹⁴ TechnoServe (2011), *Outgrower Schemes: Enhancing Profitability in Africa*.

¹⁵ Maertens M., Swinnen F.M. (2009), "Trade, Standards, and Poverty: Evidence from Senegal", *World Development*, vol. 37, no. 1, pp.161-178.

¹⁶ Maertens (2009), Horticulture exports, agro-industrialization, and farm-nonfarm linkages with the smallholder farm sector: evidence from Senegal, *Agricultural Economics*, vol. 40, pp.219-229.

Net margins

15. The net margins and profits are estimated for the various stakeholders, such as large producers, medium farmers, small farmers and farmers groups. Each crop requires different amount of labor, inputs, etc. A rough assessment results in the following costs shares: inputs costs (about 30 percent of total cost), labor (5 percent), mechanization (10 percent), logistics (35 percent), overheads (10 percent), and depreciation (10 percent).

16. The following table presents different net margins by the contractual form and the size of the stakeholder for a block. Contract farming results in higher margins for all stakeholders. Large producer participates in such an arrangement to meet specific volume requirement and to minimize ruptures in supply, especially in a context where access to land is limited. However constraints should not be overlooked. Contract farming is a long process and the benefits are partially offset by substantial extension services.

Results - Net margin after 10 years (percent)		
	Independent	Contract Farming
Large producers	21	20
Medium farmers	14	23
Small farmers	13	24
Small farmers in GIE	27	33

Project beneficiaries

17. The economic analysis is based on the difference between the revenues with project and the revenues without project for five types of beneficiaries: small producers, medium producers, wage workers, rural communities, and general population through fiscal revenues and additional investments. Large producers are not considered as beneficiaries, but rather as contributors. In this economic and financial analysis, it is assumed that their presence is a mean to an end, resulting in more fiscal revenues, more jobs in the region, a direct financial contribution to rural communities, additional investment in the region and linkages with medium and small producers.

18. The economic analysis is based on five types of flows. First, investors will pay lease fees to rural communities, based on the surface area (US\$150 per hectare). Second, investors and medium farmers will create jobs, thereby contributing to increase households' revenues. Third, investors and small and medium farmers will also pay taxes that will be redistributed within the population. Fourth, small and medium farmers increase their own revenues. Fifth, the investors will re-invest 50 percent of their profits in the region.

19. After complete establishment of all blocks (Year 5), approximately 10,000 people will directly benefit from the project. Since the blocks are gradually exploited, the number of beneficiaries will continue to increase after completion of the project.

	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5 (Project completion)	Year 10
Medium producers	9	38	94	150	188	188	188
Small producers	40	160	400	640	800	800	800
Population - Wage workers	0	156	889	2829	5985	9466	12647
Total	49	354	1383	3619	6972	10453	13634

20. *Small producers.* The program RuralStruc states that the income for an adult in a rural household (in the fourth quintile of revenues) is 300 000 FCFA per annum¹⁸, i.e. approximately US\$600 per annum¹⁹. In the baseline scenario, we assume that this revenue will increase by 1.5 percent per year. Smallholders are usually engaged in off-farm paid work and on-farm activities. The project will help them engage completely in commercial agriculture by enabling them to access land, training and financing. A poor access to finance has been thus identified as one of the main constraints for small farmers. The project (through the SAED) will partly finance equipment and inputs for the first harvests. The project would generate important revenue uplifts, especially for smallholders in a farmers' group and/or in contract farming.

	Net margin (percent)	Profits*
Independent smallholder	13	US\$2,500
Smallholder in a farmers' group	24	US\$5,800
Independent smallholder in contract farming	31	US\$7,000
Smallholder in a farmers' group and in a contract farming	33	US\$8,800

* After tax

21. *Medium producers.* It is supposed that medium farmers are farmers already engaged in commercial agriculture who will expand their surface area by investing in the blocks. Their revenues from the blocks are thus additional.

22. *Wage workers.* Maertens (2009) argues that in Senegal “access to unskilled employment in the export agro-industry has contributed to the alleviation of farmers’ liquidity constraints”, and a better know-how, resulting in increased smallholder agricultural production. Furthermore, export-oriented agricultural producers require increasingly stringent standards, in terms of both quality and marketing (shift to “prepared” vegetables). The Kenyan industry of green beans exhibits high labor intensity, with 2.5 to 5 times more than unprepared vegetable production²⁰. Even if this case does not seem precisely comparable to the Senegalese horticultural sector, it is widely acknowledged that export-oriented industry requires much labor (due to processing, quality standards etc.) than domestic-oriented one. It is assumed that wage workers in the Saint Louis region have revenue of 310,000 FCFA per annum. Investors employ between 1 and 3

¹⁸ Changements structurels des économies rurales dans la mondialisation, Juin 2009.

¹⁹ Changements structurels des économies rurales dans la mondialisation, Juin 2009.

²⁰ Humphrey J., McCulloch N., and Ota M. (2004), “The impact of European market changes on employment in the Kenyan horticulture sector”, *Journal of International Development*, vol. 16, pp.63-80.

wage workers per hectare with a rate of 2,200 FCFA per day (i.e., US\$4.4 per day). Working in farms is a way to top up the initial revenue and increase the off-farm wage income. Wage workers work about 40 to 50 days for investors. Without taking into account positive externalities (increase in productivity), they will increase their income from US\$620 to US\$940.

23. *Rural communities.* The rural communities will also directly benefit from the project. The future agreement between the investor and the rural communities can take different forms. It is envisioned that large investors will contribute through an annual lease fee, calculated on the basis of the surface area.

24. *Population through fiscal revenues and additional investment.* Increased output, income, and employment in the targeted zones will likely result in increased demand for goods and services. This is expected to generate additional wealth and employment effects and thus increase government tax revenues. Our economic and financial analysis takes into account the new tax reform that is expected to increase the tax rate for firms from 15 percent to 30 percent. In addition, large investors will partly invest their profits in economic activities in the Saint Louis region.

25. *Women.* Research indicates that women are generally concentrated in low-value productive labor, such as unpaid household labor and subsistence farming, and are less likely than men to engage in higher value activities, such as contract farming²¹. In contrast, the largest beneficiaries of wage work in the agribusiness industry are expected to be women. By guaranteeing women a voice in all stages of the process, encouraging female land rights, providing improved access to inputs, such as irrigation water and infrastructure, working to relax women's time constraints through childcare, facilitating access to skills for women and promoting women to engage in contract farming, the project aims to diminish this imbalance.

Employment in the sub-Saharan export horticulture sectors

Country	Commodity	Year of survey	Number of employees in agribusiness	Share of female employees (percent)
Cote d'Ivoire	Banana and pineapple	2002	35,000	
Senegal	French beans	2005	12,000	90
	Cherry tomatoes	2006	3,000	30
Cameroon	Banana	2003	10,000	
Kenya	Flowers	2002	40,000-70,000	75
	Fresh fruits and vegetables	2002	40,000-50,000	
Zambia	Vegetables	2002/03	7,500	65
	Flowers	2002/03	2,500	35
South Africa	Fruits	1994	283,000	53

Source: Maertens (2009)

²¹ Maertens and Swinnen (2009), *Are African High-Value Horticulture Supply Chains Bearers of Gender Inequality?*, Pathways Out of Poverty, IFAD: Rome.

26. **Women will be the main beneficiaries of the project in numerical terms, since they will constitute the bulk of wage workers in farms.** More than 65 percent of direct beneficiaries will be women. However they may be engaged in low-value activities, thereby contributing to around 27 percent of additional revenues.

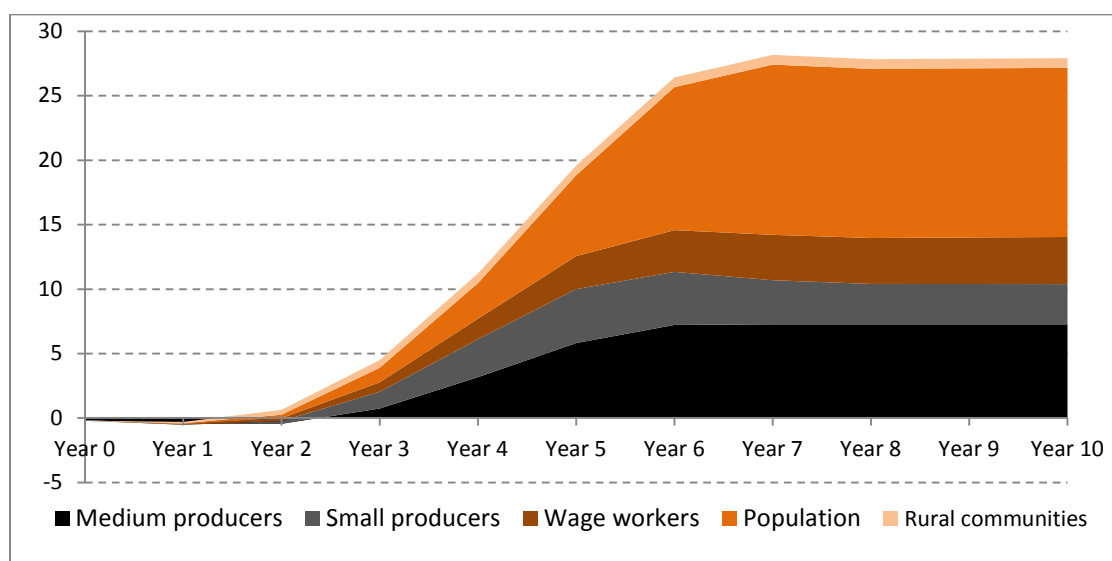
Women in the project

	# Beneficiaries		Revenues	
	Number	Percent	US\$ Million	Percent
Men	4782	35	10.2	73
Women	8853	65	3.9	27

Assumptions: 70 percent of women in agribusiness, 5 percent as medium farmers and 30 percent as smallholders.

27. Generally speaking the region and the general population are the largest beneficiaries of the project (through fiscal revenues and additional investments made by the large investors), followed by the medium producers and the wage workers.

Additional revenues from the project (in US\$ million)



28. The following table indicates the contribution per type of flows in US\$ million. Large investors are the main contributors.

Contribution	Tax	Jobs	On-farm revenues	Lease fees	Additional investments	Total
Large investors	2.9	2.8	0	0.8	6.9	13.4
Medium farmers	2.2	0.9	7.3	0	0	10.3
Small farmers	1.1	0	3.1	0	0	4.2

Other benefits

29. The project will encourage the creation of ancillary businesses. However, profits of these SMEs or their impact in terms of jobs creation were not assessed.

30. The region of Saint Louis still remains food insecure with a high rate of malnutrition and a low daily nutritional intake. At a local level, the project will directly contribute to reduced rural poverty and enhanced food security by increasing local agricultural production, developing local markets, and providing additional sources of incomes for poor rural households. The project will help diversify rural incomes, and thus reduce vulnerability.

31. Major institutional benefits expected from the project include: (a) producers are linked to markets and producer groups are effectively functioning; (b) local communities manage their physical infrastructure investments, land, water and forest resources in a sustainable way; (c) public and private sector operators are providing quality services that are demanded by producers and rural entrepreneurs; and (d) linkages schemes that include smallholders are effectively promoted. In addition, the project is expected to contribute to improving the “rules of the game” whereby agribusiness becomes more open and inclusive.

32. The project’s support to sustainable land and water management in irrigation schemes and to sustainable forest management is expected to result in various environmental benefits, including: (a) mitigated effects of droughts; (b) improved sediment retention and flood control; (c) improved access to and control of water; (d) increased carbon sequestration and storage; (e) improved management of forest areas; (f) reduced soil degradation (including salinization) and increased soil fertility.

33. At a national level, as the project is supporting two high-potential areas in the production of major food crops for the domestic market, and of promising produce for the international markets (where Senegal has a comparative advantage), the increased output from the targeted areas will increase national production, and thereby contribute to growth in overall GDP and reduction of the deficit in the balance of payments from increased level of exports and decreased level of imports. Furthermore, it is expected that consumers will benefit from reduced consumer prices and improved availability of better quality locally produced food commodities. Lastly, the newly registered SMEs, producers, or farmers’ organizations will contribute to the national budget through taxation.

Sensitivity analysis

34. For the purpose of this analysis the sensibility of the ERR and NPV to various variables is assessed. Many scenarios are proposed:

- Scenario A is the Reference scenario. Prices assumptions are relatively conservative and many smallholders failed to make a profit from their activities. However SLM practices and SMEs outside the blocks contribute to lower logistics costs and inputs costs;
- Scenario B is the scenario without SLM and no impact from SMEs outside the blocks. Without any SLM measures, farmers will continue to use as much fertilizers as in traditional agricultural practices. Moreover, SLM prevents land degradation,

- especially salinization which has been identified as a major risk in the Lac de Guiers zone;
- Scenario C supposes that no investor will be interested in sourcing from small and medium farmers. As shown by the table (below), linkages between large investors and small and medium farmers make the project viable;
 - Scenario D on the contrary supposes that every block will function in an outgrower scheme;
 - Scenario E assesses the impact of farmers groupings on the ERR.
 - Scenario F tests different hypothesis on prices variations. The economic analysis highlights that this parameter is the most important.

35. The sensitivity analysis underlines the preponderance of prices and to a lesser extent contract farming in the internal rate of return of the project.

	NPV @ 10 percent (US\$ million)	ERR (percent)
Scenario A Reference	20.22	18
Scenario B No SLM	11.55	15
Scenario C No Contract farming	6.79	13
Scenario D Contract Farming	27.76	21
Scenario E Groups	25.58	20
Scenario F		
Prices – 5 percent	2.86	11
Prices – 10 percent	(12.6)	4
Prices + 5 percent	33.68	22
Prices + 10 percent	49.52	27

Annex 8: Detailed Social and Environmental Safeguards Issues

REPUBLIC OF SENEGAL: Sustainable and Inclusive Agribusiness Development Project

1. The Senegal Sustainable and Inclusive Agribusiness Development Project (SSIAP) is a category-A project that has triggered the following safeguards policies (see table below) and the Government of Senegal, represented by the Ministry of Agriculture and rural Equipment (MOA), has prepared three key safeguards documents, namely: (i) an Environmental and Social Management Framework (ESMF), to address issues related to the triggering of OP/BP 4.01, OP/BP 4.04, OP/BP 4.36, OP/BP 4.37 and OP/BP 4.11; (ii) a Pest Management Plan (PMP), to address issues related to OP 4.09; and (iii) a Resettlement Policy Framework (RPF), to ensure compliance with OP/BP 4.12; A Riparian Notification (RN) was made to the OMVS (OMVS) representing all riparian countries to comply with the triggering of OP/BP 7.50.

Table 4: Safeguard Policies Triggered

Safeguard Policies Triggered by the Project	Yes	No
Environmental Assessment (OP/BP 4.01)	[x]	[]
Natural Habitats (OP/BP 4.04)	[x]	[]
Pest Management (OP 4.09)	[x]	[]
Physical Cultural Resources (OP/BP 4.11)	[x]	[]
Involuntary Resettlement (OP/BP 4.12)	[x]	[]
Indigenous Peoples (OP/BP 4.10)	[]	[x]
Forests (OP/BP 4.36)	[x]	[]
Safety of Dams (OP/BP 4.37)	[x]	[]
Projects in on International Waterways (OP/BP 7.50)	[x]	[]
Projects in Disputed Areas (OP/BP 7.60)	[]	[x]

Compliance with the Triggered Social and Environmental Safeguards Policies

Social Safeguards

2. It is anticipated that SSIAP will have positive social impacts at the household and community levels. Project activities will lead to an increase in household incomes for participating farmers, improved agriculture related capacity (such as knowledge on use of technology and improved farming methods), and may result in monetary and non-monetary benefits at the community level (via community negotiations with private investors, continued access to forest resources).

3. SSIAP triggers OP 4.12 on Involuntary Resettlement, as the project may require the involuntary acquisition of land for civil works, such as the construction, rehabilitation and maintenance of irrigation canals, extension of power lines, etc. The project will not finance the state acquisition of land for agricultural purposes. Nevertheless, it may lead to land use changes if community lands are reorganized to facilitate lease agreements with investors or the reconfiguration and improvement of plots in connection with envisaged investments. Such actions may result in the moving of land users, which in turn might negatively impact their

livelihoods and/or restrict access to fuel sources, grazing areas, medicinal plants, etc. Further, the proposed participatory development of forest management plans might restrict forest product uses. These project activities may furthermore have disproportionate effects on women, who may be susceptible to losing access to medicinal plants, forest products and water sources, or face increasing time burdens associated with domestic responsibilities – such as fuel wood collection – if their land use rights are changed.

4. The Borrower has prepared a Resettlement Policy Framework (RPF) disclosed on October 30, 2013, which sets out the principles and procedures to follow for the screening of sites for potential resettlement-related issues due to: (i) involuntary land acquisition (under eminent domain) for public infrastructure; and (ii) voluntary land use transactions (subleases) between investors and rural communities (see Annex 6).

5. Given the common presence of many land users and land rights holders on a given piece of land, it will be difficult for the project to ascertain that what the landowner characterizes as a voluntary transaction truly represents an informed and voluntary choice on the part of the community as a whole. There exists in such situations the risk of elite capture and coercion over choices, hence the RPF's importance as a tool to ensure that the procedural and substantive rights of local people are appropriately addressed. A social screening form and associated procedures is therefore included in the RPF, for each candidate sub-project for SSIAP financing to undertake prior to Bank approval of the associated subproject. The project will also support the carrying out of land use rights inventories and participatory community decision-making to help obviate the risk of unintentional displacement of rights or livelihood activities. The mapping of forest boundaries and development of forest management plans will be carried out using a participatory approach following establishment of a forest user association and a participatory diagnostic.

6. No person will be required or asked to relinquish land that they are currently using to accommodate an investment or associated activities (such as the establishment of associated infrastructure or land development for preparation of smallholder plots) without being provided secure tenure over alternative land of at least equivalent quality and without appropriate support for restoring or improving any negatively affected livelihoods activities or access to resources.

7. As specific sites for sub-project areas are currently unknown and not expected to be known before early implementation phase, an RPF has been prepared by the Counterpart to ensure full compliance with Senegalese law and Bank policy on all resettlement-related issues that are likely to arise in the project. The RPF provides guidance on the preparation of specific Resettlement Action Plans (RAPs), as specific sub-project sites are identified.

8. As highlighted in the environmental section below, the ESMF and RPF provide processes and conditions for determining the eligibility of investments or activities for project support. The project will not support (nor are private sector investors likely to be interested in) investments in land over which there are significant ambiguities of legal status (including disputes within communities or between different claimants, boundary disputes, disputes between customary owners and the state, or persisting complaints stemming from prior state land acquisitions). The RPF includes specific guidelines and procedures to ensure the due diligence screening of land for these and other key issues.

9. The RPF identifies groups that are susceptible to marginalization from the process of decision-making on land use, including women, migrant farmers and pastoralists. It also identifies groups vulnerable to negative impacts related to displacement, including persons over 70 years, persons with physical or mental disabilities, women, migrant farmers and herdsmen, widows, orphaned children and the bedridden or seriously ill. Among the corresponding mitigation measures included in the RPF are: (i) the use of a checklist to ensure inclusion of vulnerable groups during sub-project screening and inclusive consultations with land users (including herders) and landowners on sub-projects, especially during negotiations between investors and communities. (more details are provided in Annexes 3 and 7).

10. It is unlikely that significant resettlement of existing farmers will take place in order for communities to assemble contiguous plots of sufficient size to be attractive to investors, for three main reasons: (i) horticulture does not require very large tracts of land (typical large investor farms are in the 200 ha range); (ii) a significant quantity of potentially arable land is still available (more than 55,000 ha of unused and inhabited land in the two targeted areas combined); and (iii) the project is focused on the development of uncultivated land or land currently used for rain-fed crops. In the latter case, existing farmers will maintain the land for which they already have land use rights and be provided with new irrigated land after the development of irrigation schemes and through a shared-land agreement with investors. Any cases of physical resettlement will thus be limited to parcels affected by infrastructure construction and addressed through the preparation of a RAP, according to the guidelines set forth in the RPF and in compliance with the principles of OP 4.12.

11. To the extent that any reallocation of individual plots is required, rural communities will provide comprehensive support to assist both investors and smallholders in securing land rights, through the establishment of a local land management office in each targeted rural community and the providing of land mapping and registration tools, training and land use certificates.

12. Additional key issues to be addressed under the RPF include passageway rights for livestock and claims from farmers who left their land as a result of salts.

13. As the risk of elite capture exists, and the possibility that local communities may be marginalized from discussions on land use (e.g., negotiations over rents, lease periods, etc.), as well as monetary and nonmonetary benefits from investors to communities, the RPF will include appropriate rules for a consultation plan and grievance mechanisms to complement other tools designed to mitigate these risks (such as the embedding of clear principles for community-investor engagement in the model lease and the guidelines for participating communities).

Environmental Safeguards

14. SSIAP triggers the following environmental safeguard policies: Environmental Assessment (OP/BP 4.01), Natural Habitats (OP/BP 4.04), Forests (OP/BP 4.36), Pest Management (OP 4.09), International Waterways ([OP/BP 7.50](#)), and Dam Safety (OP/BP 4.37). The Counterpart has prepared an Environmental and Social Management Framework (ESMF), since the exact project areas are not yet known. A Pest Management Plan (PMP) has been prepared to fulfill OP 4.09 requirements. Both the PMP and the ESMF were publicly disclosed

in-country on August 10, 2012 and at the World Bank InfoShop on April 1, 2012 and August 1, 2012 respectively.

15. The SSIAP is rated a category A project. It is expected to have positive environmental impacts through its support for commercial agriculture investment schemes that promote sustainable management and better use of land and water resources. Potential environmental risks could include: i) point and nonpoint pollution of water sources, especially water pollution and bank erosion in Lac de Guiers, which is the main drinking water source for Dakar; (ii) issues associated with the improper use, handling and storage of agricultural chemicals; (iii) negative environmental impacts associated with the rehabilitation of irrigation or small-scale civil works and water stations and/or warehouse for food processing or storages; (iv) construction, rehabilitation and maintenance of irrigation canals, access roads, extension of power lines to connect commercial farmers and agro-processing facilities; (v) agricultural development and commercialization which will lead to increased production volumes and value added processing and marketing capacity of agribusiness involved in commodity chains and warehousing facilities; (vi) increase in waterborne diseases, such as malaria, intestinal and urinary bilharzia and increase in HIV/Aids and other sexually transmitted diseases; (vii) expansion of invasive plant species, such as *Typha australis* and water hyacinth and others; (viii) the risks of potential transgenic crops; (ix) reduction in grazing areas and risks of impacts on wetlands (Ndiael, a Ramsar site: migratory birds) through the invasion of pastoralists and impacts on transhumance corridors, which could lead to increased conflicts between farmers and pastoralists; (x) potential impacts on the remaining forests in the area, which could result a decrease of biodiversity in the area and an increase in the scarcity of fuel wood resources; (xi) risk of soil degradation and fertility loss (increased loss of organic matter) if SLWM practices are not adopted as planned (xii) risk of potential disturbance on flora and fauna in selected forests and woodlands due to firebreak works and demarcation works.

16. The project would be demand-driven and would possibly explore a variety of saleable agriculture crops for development in Senegal, including transgenic. If transgenic crops become part of the crops list supported under the Project, it will proceed with environmental safeguards consistent with international good practice and the regulatory framework of the host country. In particular, development of such crop in either project location would need to be carried out in accordance with the obligation of Senegal under international treaties to which it is a party, including the Cartagena Protocol on Biosafety. Potential adverse environmental impacts associated with the proposed SSIAP activities such as: post-harvests and handling equipment and means; technology and marketing at agro-enterprise level; and handling, transportation, storage and processing assets improvements - will be minor, site specific, and handled under safeguard measures already in place for activities that would be previously implemented.

17. In order to comply with national regulations and World Bank safeguards policies, the Counterpart has prepared both an ESMF and a PMP. The ESMF sets forth the basic principles and prerogatives to be followed once there is a clear definition of project intervention areas during implementation, and include a social and environmental screening form that each sub-project candidate for SSIAP financing would undertake in order to ensure full compliance with safeguards policies prior to implementation of the given activities. Similarly, the PMP is designed to address the risk that intensification of agricultural activities may lead to increased

use of pesticides and herbicides that, if unmanaged, could result in negative impacts on human and animal health and on the physical and natural environment. Provisions have also been established in the ESMF to ensure appropriate capacity building for all key stakeholders involved in SSIAP activities and intervention zones.

18. Once the physical locations and design of the SSIAP intervention areas are defined, the Counterpart will prepare and publicly disclose in a timely and appropriate manner a site-specific Environmental and Social Impact Assessment (ESIA) to provide necessary mitigation measures for any foreseen social and environmental aspects on the proposed intervention site. The ESIA will also be publicly disclosed, both in-country and in the Bank's InfoShop, prior to the physical start of the said-activity.

19. Mitigation measures under the Project will include the application of Integrated Pest Management (IPM) practices and the application and promotion of pesticide management practices outlined in the guidelines of the International Code of Conduct on the Distribution and Use of Pesticides; risk management for transgenic crops through the national framework and international best practice; and the use of environmental and social impact assessments (ESIAs) or Environmental and Social Management Plans (ESMPs) as appropriate for minor civil works.

20. The World Bank OP 4.04 on Natural Habitats has been triggered in this project as the project support activities in some critical habitats including classified forests and woodlands. There is a potential risk that pastoralists will move away from the project zones and invade the nearby protected wetland areas (Ndiael, a Ramsar site with significant migratory bird populations). The project will avoid adverse impacts on natural habitats and, where necessary, appropriate plans will be prepared and/or offsets established to mitigate any impacts. Participatory forest management plans will be prepared as and when necessary to avoid or adequately mitigate these impacts, especially on neighboring communities.

21. OP/BP 4.11 is also triggered as civil works for the construction of canals and land preparation may lead to land excavation activities in the region. The ESMF includes measures for dealing with existing cultural sites and chance finds of physical cultural resources. In case the project is likely to have adverse impacts on physical cultural resources, appropriate measures for avoiding or mitigating these impacts will be identified and addressed in the ESIAs for subprojects to include such mitigation measures before any type of works is undertaken.

22. The World Bank OP 4.36 on Forests has been triggered, since expansion of agricultural areas has a potential to encroach on remaining forest areas and project implementation will take place in nine selected classified forests and nature reserves. The ESMF includes measures for forest management; forest management plans may be prepared as and when necessary during project implementation.

23. The project also triggers OP 4.37. With respect to dam safety, the OMVS, which has the final responsibility for the operation of the Diama and Manantali dams, has carried out dam safety assessments for both dams in 2001 and 2011, respectively. The relevant safety inspection reports mainly focus on hydroelectric and mechanical equipment, and do not contain the safety

review of the civil engineering structure of the dam. The Bank also has received copies of the Operation and Maintenance Plans. A framework for dealing with emergency situations was submitted to the Bank on November 15, 2013. To further ensure compliance with OP 4.37 recipient will be required in the Financing Agreement to develop a full-fledged emergency preparedness plan for each dam, and to enter into an agreement with OMVS, requiring OMVS to (i) carry out periodic inspections of the dam at least every 5 years, by independent experts, including a civil structure and dam safety specialist.

24. The project also triggers OP/BP 7.50 as some project activities are expected to involve use of irrigation water from the Senegal River. The Senegal River flows through four riparian countries namely Guinea, Mali, Mauritania and Senegal. On November 2012, the Government sent a Notification Letter of the proposed Project activities and their impact on water use to the High Commissioner of the OMVS, an authority established in 1972 by a treaty among the riparian countries, empowered to authorize the development of infrastructure and projects planned by its member-countries that could have significant impacts on the water resources of the basin. The Government received a response from the OMVS High Commissioner dated February 5, 2013, indicating that the OMVS will take all necessary actions with the *Commission Permanente des Eaux* in order to make available the amount of water required for the project.

25. Considerable development activities have taken place in the Senegal River Delta since 1972. The SSIAP itself will have limited cumulative impacts, as described in the ESMF, but the project will finance an Environmental Audit to identify cumulative impacts over the last decades and identify issues how to improve: (i) environmental and social management of the Delta's resources, e.g. optimize water resources use, management of water quality, re-flooding of areas for economic development and biodiversity conservation, management of saline intrusion, etc.; (ii) improve planning of irrigation development and management and other economic development activities in the Delta in order to achieve a more sustainable development outcome.

26. Public Consultation, Participation and Disclosure: The ESMF, PMP and RPF were prepared in compliance with national regulations and Bank safeguard policies. Their preparation followed a broad participatory consultation process with all relevant stakeholder groups, and was consistent with the approach adopted at Project inception. SSIAP being a category A project, it was agreed to have a separate comprehensive report on Public Consultation and Participation (PCP) that will clearly explain the ways and means adopted to ensure meaningful and participatory stakeholders' consultation on the importance of SSIAP with the view of fostering broader community support to SSIAP. Because public consultation and participation is an iterative process, therefore this participatory approach will be carried along throughout Project implementation, supervision and evaluation.

Annex 9: Senegal's Land Environmental Profile

REPUBLIC OF SENEGAL: Sustainable and Inclusive Agribusiness Development Project

A. Land resources and land degradation in Senegal

1. In Senegal, nearly 70% of its population derives their livelihoods from the land's resources. These natural resources provide functions related to production (agricultural, wood, water), regulation (protection from erosion, groundwater recharge, sewage), support (habitat, river and sea transport) and cultural and recreational (sacred places, tourism sights).
2. Senegal covers a surface area of 19.5 million ha, of which 19 percent are farming land (3.8 million ha²²), 32 percent (6.3 million ha) are covered by forest, savannah and protected areas; the remaining is shared between wasteland and unclassified bush and urban lands. About 65 percent of the farming land (2.4 million ha) is used for rain fed crops, nearly 3 percent for floodplain crops and irrigated crops (100,000 ha), and the remaining is uncultivated and is mainly used for herding (1.3 million ha).
3. Like other Sahelian countries, land degradation in Senegal has become a recurring phenomenon that represents a major constraint to sustainable development. It is estimated that land degradation in Senegal affects approximately 2.5 million hectares, about 34% of the land area²³ or 4.5% of the GDP according to 2002 estimates.²⁴ The forest cover continues to deteriorate at a rate of 0.5% annually. Land degradation is occurring as a result of natural factors such as drought, water, wind, and salt intrusion and more profoundly because of anthropogenic factors such as land clearing, overexploitation of forest products essentially for wood energy, overgrazing and bush fires.²⁵

1. Types of Land degradation²⁶

4. There are different types of soil degradation as depicted below.
5. **Wind erosion.** This is triggered by specific ecological, climatic and soil characteristics, as well as inappropriate land use methods. The areas most affected are the sandy texture soils along the Senegal River valley; the coastal area of "Niayes" from Dakar to Saint Louis; and, sandy Ferlo and Center-north (Northern Groundnut Basin) which is subject, throughout the duration of the dry season (7-9 months), to the strong Harmattan winds (Figure 2). Wind erosion has the effect of weakening the topsoil, thus contributing to the deterioration of the soil structure and fertility decline (CES, 2010). In addition, wind actions cause the burial of vegetable bowls, ponds and roads as well as the loosening of the tree roots.

²² The Groundnut Basin represents 57 percent of these lands,; Casamance represents 20 percent, Eastern Senegal 10 percent, and the Senegal River valley 8 percent (PROGERT, 2007).

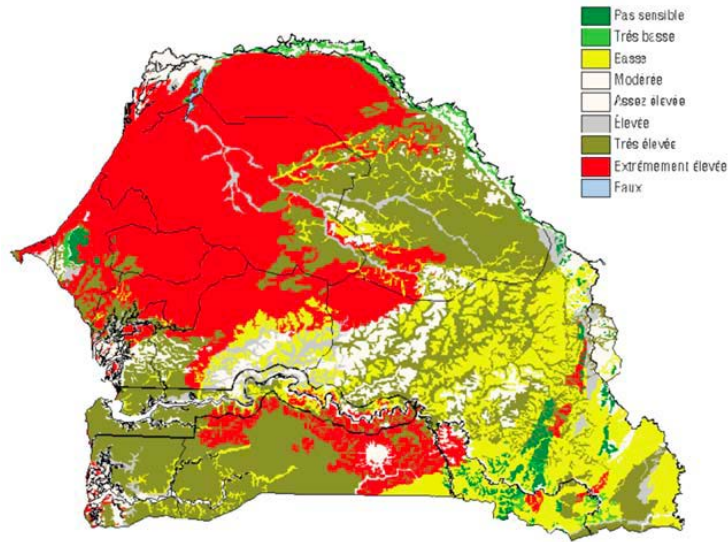
²³ CSE, 2011, Outils de gestion durable des terres au Sénégal : Contribution de LADA. Rapport.

²⁴ Republic of Senegal, 2002, Fiches Techniques pour l'Elaboration du Plan d'Orientation pour le Développement Economique et Social 2002 – 2007.

²⁵ INP, 2012, National Strategic Investment Framework for Sustainable Land Management.

²⁶ Taken from: Ministry of Environment and Protection of Nature and the Centre de Suivi Ecologique (CSE). 2010. Report on the State of the Environment in Senegal.

Figure 2: Sensitivity of soil wind erosion in Senegal



6. **Water erosion.** This type of erosion has significantly affected several regions of Senegal, due to the high sensitivity of its soils (Figure 3). This erosion accounts for 77% of the degraded land in the country. **One of the areas most affected by water erosion is located along the Senegal River,** where the natural vegetation has disappeared; the floors are dissected or truncated. Erosion has destroyed infrastructure (roads and bridges), threatened many lands, destroyed canopy and created badlands that can be seen along the fossil valleys of northern, central and eastern Senegal (Figure 4).

Figure 3: Sensitivity of soil erosion in Senegal

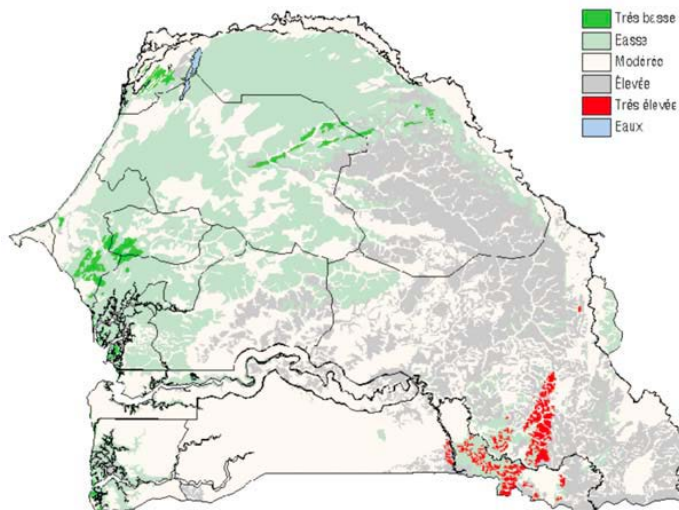


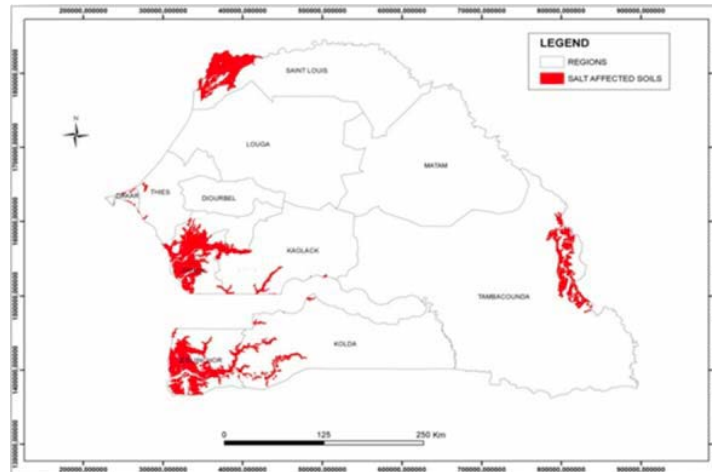
Figure 4: Some illustrations of erosion's threats

	
<p>Threats to agricultural parcels</p>	<p>Threats to habitat</p>
	
<p>Badlands</p>	<p>Threat to infrastructure</p>

7. **Chemical degradation.** Salinization and acidification are the main processes that lead to chemical degradation. This kind of degradation has been caused by several factors including intrusion of the seawater along the country's coast and the capillary rise occurring in areas with brackish or saline groundwater under the effect of increased evapotranspiration due to rising temperatures linked to climate change. Other factors include poor agricultural practices that promote soil salinization and irrational use of chemical inputs, poor facilities that lack adequate drainage, and inappropriate use of brackish water for irrigation.

8. The estimated land area under salinization process varies widely from different authors (from 0.9 ha to 1.7 million ha), **however there is agreement that the areas most affected are the delta of the Senegal River**, the lower reaches of the Casamance, Gambia Sine and Saloum and Niayes (Figure 5). In the Senegal River Valley, salinization is a particularly serious threat in irrigated soils whose effect has increased following the construction of large dams on the river.

Figure 5: Main areas affected by salt in the scale of 1/500 000 (Source: INP, 2008)



9. **Acidification processes affect mostly the soils of river-sea areas of the Senegal River Valley, Casamance, Sine-Saloum and is also evident in the Niayes.** Alterations in soil acidity have been very damaging to soil biodiversity. Acidification has caused disruption of microbial life fixing atmospheric nitrogen in soils groundnut basin. The appearance of known nude beaches in the northern Basin Peanut is characteristic of this phenomenon.

10. **The physico-biological degradation.** The intensity of the physico-biological degradation is less apparent than the other cases presented. This form of degradation is manifested by a deterioration of soil's physical capacities (low porosity, permeability, increase in bulk density and a decrease in the soil's structural stability), an increase in the rate of mineralization and reduction of soil's organic content. This phenomenon is essentially caused by human activities particularly agriculture mining groundnut.

2. Drivers of land degradation

11. The direct and indirect driving forces related to land²⁷ and forest degradation in and around agricultural lands are of natural and anthropogenic nature. The direct natural causes are the most relevant causes of land degradation at national level including (i) droughts (depending on soil quality and anthropogenic pressure) assessed as 5 %; (ii) wind erosion assessed as 1 %; and (iii) wild forest and grassland fires assessed as 4 %.

12. The direct anthropogenic causes relate to (i) deforestation (agricultural expansion requesting land clearing and deforestation); (ii) overgrazing assessed as 3 %; (iii) crop and soil management (inappropriate agricultural methods including irrigation) resulting in increased soil erosion assessed as 2 % (see para. 15 and 16 below); (iv) soil salinization and alkalinization, plant cover

²⁷ Mapping of LD incidences in Senegal show higher incidences in the northern, more arid part of the country. Yet, LD assessments are not conducted at high-resolution level so as to account for biophysical variation. A recent assessment shows that high percentages of under-nutrition are associated with most degraded areas on lower quality soils that were located far from infrastructural facilities. Hence, absence of agricultural opportunities and markets is associated with mining of available land resources and lower yields.

and residues removal; (v) overharvesting of forest products and overexploitation of vegetation cover (e.g. for fuel wood and charcoal; timber; fencing; fodder); (vi) trampling on animal paths assessed as 3 %; and (vii) forest fires.

13. **Indirect causes include (i)** insufficient food production and poverty assessed as 8 %; (ii) population pressure assessed as 7 % (see para. 15 below); (iii) governance assessed as 5-6 %; (iv) education and awareness and access to knowledge assessed as 5 -6 %. Noteworthy, infrastructure, land tenure, and conflict are less widespread causes of land degradation in Senegal.

14. Beyond direct and indirect drivers to land degradation, the identification of the land use type most affected is also important for a well-designed operation tackling the issue of land degradation: **Areas of irrigated production systems are the most affected at national level** (73 % showing symptoms of land degradation). Also flood plains, agro-pastoral transhumant and rain fed areas show alarming percentages. More than 20 % of forestry and nature reserve areas are affected. If successful, this operation will actually address one of the main causes of land degradation in irrigated areas.

15. **Population growth.** Senegal's population has quadrupled in 50 years. With 53.3% of its population under 20 years, Senegalese population is composed mostly of young people. Rural population and those living in secondary cities depend on agriculture in the broadest sense, for their daily activities. This population growth has led to an expansion of cropland, inappropriate farming practices including grazing and increased pressure on forest resources due to high demand for charcoal. It has been estimated that anthropogenic pressure is responsible for 11 percent of soil's degradation (CES, 2010).

16. **Agricultural practices.** Land clearing for agriculture and wood energy has been a strong direct driver of degradation. In Senegal, the agricultural sector is considered the engine of the national economy, as it is the main source of jobs and income for more than 60% of the population. Agriculture employs around 65-70% of the workforce and contributes to 9.6% of GDP.

17. The development of agriculture has been largely dependent not only on the state of soil and rainfall, but also the cultivation techniques applied. Some of the current farming practices like burning for field preparation and overgrazing have had harmful effects on the ground. **Extensive agriculture, the inadequate integration of agriculture and animal husbandry, the progressive abandonment of fallow lands and increased monoculture practices, and the disintegration of traditional land management systems are all factors that have strongly contributed to deforestation, loss of soil fertility and soil degradation.**

18. **Land tenure insecurity.** Traditionally, land management was governed by customary rules that ensured the safety of land management. This mode was supplanted by the nationalization of land by the Senegalese government. Areas for crop and livestock operations became under the control of State. With decentralization, the responsibility for the management of these lands (assignment and decommissioning) is now entrusted to the Rural Council.

19. **The use of fertilizers and pesticides.** In Senegal as in other countries, the use of fertilizers and pesticides has been part of the food policy to increase yields and agricultural production. The horticultural area in the Niayes located along the coast from Dakar to Saint-Louis, is particularly affected by chemical pollution due to high rates of fertilizers and pesticide use and the sandy texture of the dominant soils. In this area, the groundwater is threatened by pollution from the use of large quantities of chemical inputs (especially organic persistent pollutants) in vegetable production. This situation has started to improve as new improved technologies, environmental legislation and the promotion of organic farming have been put in place. Still the issue raises concern.

20. **Pastoral systems.** Livestock numbers have increased steadily from 1990 to 2007. This increase was mainly favored by the considerable achievements of the sector in the fight against diseases. The quality and quantity of pastures have been affected by recurrent rainfall deficits. With the reduction in rangeland areas by the advance of the agricultural frontier and the effect of droughts, animal overload pressure has become stronger resulting in a continuing degradation of natural rangelands.

3. The impacts of land degradation

21. **Reduced potential for growth.** Soil fertility depletion (one of the forms of land degradation in Senegal) represents in fact one of the main causes of stagnation in the agricultural productivity and, consequently, one of the major constraints to agriculture and economic growth. Declining land productivity translates in a fall in the contribution of agriculture to GDP in the country.

22. **Food insecurity and social costs.** Senegal relies on massive importations of food products, including rice, dairy products, meat, and horticultural products. Despite significant efforts to ensure the diversification and intensification of production, considerable efforts are still needed. If current trends continue, the progressive impoverishment of the peasantry, land degradation and lower yields would continue. This could also lead to a growing rural exodus of people to the urban centers. Rural-urban migration (particularly to Dakar) and population growth in urban areas increases the risks of social unrest, unemployment, rebellion, exclusion and insecurity.

23. **Reduced farm incomes and livelihood options.** Because most of the rural population (which represents the poorest and therefore the most vulnerable) heavily depends on land resources for their livelihoods, increasing land degradation reduces their livelihoods options and income generation opportunities, thus exacerbating their poverty and increasing their vulnerability.

24. **Imbalances in ecosystems.** Senegal's territorial ecosystems and their resources are an important part of Senegal's natural wealth. Land degradation is considered one of the key factors of continuing imbalances in the ecosystems (including water resources) and worsening of wildlife habitats.

4. Drivers of increased GHG emissions

25. Senegal as the other Sahelian countries has experienced significant climate variability in the past. Climate change in the form of periodic drought and generally declining precipitation has been found to result in reduced yields and increased severity of bushfires. The main driving forces behind increased GHG emissions in intervention areas relate to agricultural activities and deforestation but also to land degradation due to reduced aboveground biomass and reduced soil carbon. As severity of degradation increases, erosion is likely to increase, resulting in decrease of carbon sequestration potential. Careful landscape management is needed to secure a range of key ecosystem services. The national estimation of the scale of land clearing and forest degradation has been used to define baseline scale of the problem in the project intervention areas as document in the tracking tools.

26. According to the FAO²⁸, irrigation is recommended to increase the amount of carbon in soil in dryland soil. In small-scale irrigation systems, a high potential for carbon sequestration arises from the supply of water that allows high primary productivity, from slow decay of soil carbon, much of which is bound closely to clay particles, as well as from extensive use of manure, both from animal and crop residues. It should be noted that the project design does not provide for significant leakage dynamics as it does not only enhance carbon storage on agricultural lands but also promote carbon sequestration through sustainable forest management. According to carbon experts, the increase in vegetation coverage through agribusiness and irrigation related activities in the intervention area and the natural regeneration efforts supported in the surrounding forests and nature reserves will slightly improve the carbon footprint.²⁹

5. Best practices of Sustainable Land Management for semi-arid areas

The project will promote and adapt best practices of SLM techniques used and assessed in similar semi-arid areas (average annual rainfall 250 – 450 mm)³⁰ as summarized in the table below. The choice of the most appropriate practice will be determined by local stakeholders and technicians based on the soil and vegetation and topographic conditions and socio-economic context. All practices focus on increasing productivity of land, improving local livelihoods and ecosystem services.

²⁸ FAO World Soil Resources Report 102, 2004 Carbon Sequestration in dryland soil

²⁹ This has been documented in the FAO publication on Carbon Sequestration in Dryland Soils (2004). Within West Africa, avoided deforestation represents one of the greater contributor to overall carbon balance.

³⁰ Best Practices SLM; LADA Senegal, CSE, Dakar 2010; SLM in practice, TerrAfrica, WOCAT, 2011.

Table: Summary of SLM best practices in semi-arid areas (250 – 400 mm annual rainfall)

SLM Practice	SLM Technique (Case study)	Adoption Experiences	Main Adoption Constraints	Guidance	Climate Variability Resilience	Climate Change Mitigation / Carbon sequestration above/below ground	Benefit -Cost Ratio short-/long-term
Rainwater Harvesting (collection of rainfall for agriculture)		Simple and inexpensive techniques to ensure adoption of communities. A key adoption success factor is to keep maintenance needs low.	Not leading to significant production increase. Resource use conflicts (land, water).	Combine with improved soil fertility management. Improved watershed planning and allocation of water resources.	+++ Reduces risk of production failure and helps cope with more extreme events. It enables crop growth including trees.	+	-/++
	Tassa Planting Pits	Tahoua, Niger Adoption rate is moderate.	Availability of manure. High labor input for implementation and maintenance.	Subsidize transport of manure.			+
Small-holder Irrigation Management (increase efficiency of water use)		SSA shows lowest degree of investment in irrigation. Aim needs to be to develop decentralized smaller irrigation system without causing land or water degradation.	Access to micro-credit for high investment costs (barrier for poor farmers) Requires high level of technical knowledge.	Need for reliable water supply; profitability of investments; access to financial services, markets and infrastructure; technical support. Government coordination of agriculture and water sector			++
	African Market Garden (horticulture production system based on low-pressure drip irrigation)	Senegal (cluster model). Holistic management package integrating all aspects of production, post-harvest and marketing).	Capital intensive. Need farmers with access to knowledge, marketing and services.	Sharing infrastructure, land and water through producer groups (cutting investment costs by 60% per unit area). Set up AMG service centers.			+++

SLM Practice	SLM Technique (Case study)	Adoption Experiences	Main Adoption Constraints	Guidance	Climate Variability Resilience	Climate Change Mitigation / Carbon sequestration above/below ground	Benefit -Cost Ratio short-/long-term
	Low-Pressure Irrigation System ‘Californian’ (using underground pipes)	Diourbel, Senegal High demand; low or no maintenance needed.	Conditions for adoption include: availability of shallow aquifers; sandy clay soils; land legislation and tenure; and access to markets and microfinance.	Involvement of local leaders, NGOs, private sector are prerequisites for successful implementation .			+
Agroforestry (integrates use of woody perennials with agricultural crops)		In drylands AF uses trees in productive niches within a farm.	Lack of knowledge about traditional and innovative AF practices. Lack of secure rights to tree. Impact over different temporal scales is an issue. Seed availability and survival rate low.	Long-term research needed to assess crop-tree system. Collaboration between private sector, research and extension (tree nurseries). Capacity-building of farmers.	+++	++ Recognized as GHG mitigation strategy.	+ / ++
	Farmer managed natural regeneration (regeneration of stumps of vegetation used to be slashed and burned)	Maradi, Niger (good adoption with minimal external assistance)	Scarce presence of live tree stumps. Cultural practices to remove trees from land. Land is treated as common property during dry season and damages occur	Provide seeds of indigenous species. Capacity-building of farmers. Community rules and enforcement			++ / +++
Integrated Crop-		Adoption generally low	Insecurity of land tenure.	Support appropriate	+	++	++

SLM Practice	SLM Technique (Case study)	Adoption Experiences	Main Adoption Constraints	Guidance	Climate Variability Resilience	Climate Change Mitigation / Carbon sequestration above/below ground	Benefit -Cost Ratio short-/long-term
Livestock management (optimizes use of crop and livestock resources)		and if practiced then with external support. Need skillful organization and management of animals and land.	Weak governance and enforcement. Access to credit. Need for technical assistance for animal and crops.	land use policy. Install control and fining mechanism. Support credit schemes.		Carbon budget affected by methane emitted by livestock.	
	Night Corraling (rotation of livestock)	Fakara region and Chikal territory, Niger High adoption.	Conflict with transhumant pastoral groups. High labour investment in year 1. Organization of rotational corraling within village community.				+++ / ++
	Rotational Fertilization (rotation of temporary habitation resulting in successive fertilization of land)	Niger High adoption.	Growing costs and decreasing availability of timber for establishment of infrastructure and clearing for cultivation.	Promote traditional techniques of long-term conservation of housing materials.			++ / +++
Conservation agriculture (combines minimum soil disturbance (no-till), permanent soil cover and crop rotations)		Slow adoption in SSA. Immediate benefits needed by land users to take investment risk. Farmers often adopt only certain	Need for capital investment for adapted machinery and small-scale equipment and fertilizer/seed s. Competition between soil cover and livestock	Focus on no-tillage methods and linking CA with livestock production. Provide external support for equipment and inputs. Secure land use rights.	++	++	+ / +++

SLM Practice	SLM Technique (Case study)	Adoption Experiences	Main Adoption Constraints	Guidance	Climate Variability Resilience	Climate Change Mitigation / Carbon sequestration above/below ground	Benefit -Cost Ratio short-/long-term
		components.	feed. Uncertain land use rights.	Ensure long-term advisory services.			
Pastoralism and rangeland management (grazing on grassland)		Adoption depends on livestock mobility, effective communal tenure, governance systems and herd adaptation.	Weakening of traditional governance over communal natural resources, restricted mobility, sedentarisation, boundaries, and advancing agriculture.	Support legal communal arrangements and legislation for transhumance. Develop contingency plan and measures for disaster mitigation.	++	+	
	Couloirs de Passage (defined passageways linking pasture, water points and corralling areas to avoid land use / water conflicts)	Tillaberi, Niger High adoption.	Planting is capital intense and requires consensus on transformation of private land to communal passageway. High maintenance needed from landowner as community organizations are weak. Conflicts between pastoralists and private ranches.	Definition of couloirs as public infrastructure. Enhancement of organizational capacity of local population. Establish community-based land tenure commissions.			++/+++
	Improved well distribution for sustainable pastoralism	Akouboubou, Abalak, Tahoua, Niger Good adoption based on incentives (costs paid by projects)	High costs of implementation and maintenance.	Public investments.			++/+++
Sustainable		Adoption is	Inadequate	Need for legal	+++	+++	-/++

SLM Practice	SLM Technique (Case study)	Adoption Experiences	Main Adoption Constraints	Guidance	Climate Variability Resilience	Climate Change Mitigation / Carbon sequestration above/below ground	Benefit -Cost Ratio short-/long-term
Forest Management in Drylands		low.	<p>legal and institutional framework.</p> <p>Population pressure leading to increasing demand on fuelwood.</p> <p>Short-time perspective not allowing immediate returns to communities.</p> <p>Lack of knowledge.</p>	<p>and institutional framework including integration of forests in landscape and rural development planning.</p> <p>Community-based approach is needed.</p> <p>Awareness raising and capacity building.</p> <p>Sustainable markets for NTFP including access to micro-financing.</p>			
	Assisted natural regeneration of degraded land (enclosing degraded land for regeneration)	Soum province, Burkina Faso High adoption and demand for expansion.	<p>High investment costs.</p> <p>Insecurity of land rights.</p>	<p>Develop income-generating activities to amortize investments.</p> <p>Conclude contractual agreements.</p>			+ /+++
Integrated Soil Fertility Management		Depending availability and access to inputs such as organic fertilizers and affordability of inorganic fertilizers.			++ Increase in soil organic matter and biomass resulting in better water holding capacity supportive of more drought-tolerant cropping systems	+	++ /+++

B. The Saint Louis Region and its protected areas

27. The St. Louis region covers an area of 19,034 km² or 9.9% of the Senegalese territory. Since the last cut made in 2008, the region has three departments (Dagana, Podor and St. Louis), 7 districts, 19 towns, 18 rural communities, and a total of 38 communities. The region has three natural zones:

- The valley with depression and micro-reliefs;
- The forest grazing areas;
- The Niayes in its maritime fringe.

28. The Saint Louis is one of the regions with the highest number of protected areas. Currently, there are 60 protected areas of various types that have been largely created by the State, except a few implemented by local authorities. The region, where the Ngalam Valley and Lac de Guiers are located, benefits more than 40,000 hectares of classified forests and reserves which generate revenues from tourism and sustain local population through gathering, wood collection, hunting and fodders. However, tree density in these areas has **substantially decreased as a result of reduced precipitations, overgrazing and bush fire**. This area suffers from severe land degradation, in particular from wind erosion and salinization while water is contaminated with fertilizer and pesticide. The proposed project will finance activities in classified forests and natural reserves (see table in annex 9).

Annex 10: GEF Incremental Cost Reasoning

REPUBLIC OF SENEGAL: Sustainable and Inclusive Agribusiness Development Project

A. Background context

1. The rural households in Senegal heavily depend on natural resources primarily for food production as well as wood energy, gathering and hunting. A key part of Senegal's natural capital is its soils, which is under considerable threat from land degradation. Land degradation has been estimated to affect approximately 34 percent of the land area. In addition, forest cover continues to deteriorate at an annual rate of 0.5 percent.⁶⁹

2. The government of Senegal has established as one of its priorities to develop a competitive, inclusive, and sustainable agribusiness industry, singling out in particular the horticulture and rice value chains in the Saint Louis/Senegal River region. The prioritization is supported by the country's attributes that make it an attractive location for private investment in agriculture and agribusiness.

3. While such investment can provide large benefits, it also carries considerable environmental risks. For example, over time, inappropriate farming techniques can severely degrade the quality of topsoil and threaten water quality. This region benefits from 40,000 hectares of classified forests and reserves which generate revenues from tourism and sustain local population through gathering, wood collection, hunting and fodders. In recent years, tree density has substantially decreased as a result of reduced precipitations, overgrazing and bush fires. The project area suffers further from severe land degradation, in particular from wind erosion and salinization.

4. Although it is not possible to quantify the respective impact of each driver, land degradation is occurring in Senegal as a result of natural factors such as drought, water, wind, and salt intrusion and because of anthropogenic factors such as land clearing, overexploitation of forest products essentially for wood energy, overgrazing and bush fires. There is an emerging consensus that the future climate change outlook for Senegal may bring considerable increases in the length and intensity of droughts.

5. The proposed blended IDA/GEF Senegal Sustainable and Inclusive Agribusiness Development Project (SSIAP) aims at piloting **a landscape approach for agriculture development by which agriculture would not be a driver to land degradation and deforestation but rather a driver for wider adoption of Sustainable Land and Water Management (SLWM) practices and sustainable forest management.** Based on lessons learned in Senegal⁷⁰, the project supports a model placing communities in a leading role to

⁶⁹ Republic of Senegal, 2010, Global Analysis of Vulnerability, Food Security and Nutrition

⁷⁰ In particular lessons learned from the GEF4 SLM project in Senegal's central region (see ICR #0002642, p. 22 ff., September 2013). These lessons were supportive of the project's rationale and impacted the design. They include: (i) "Beneficiaries commitment and ownership are critical to the success" and "Using community demand-driven approach can greatly improve the ownership success, and sustainability of agricultural development projects that provide infrastructure or equipment. Especially in irrigation projects where maintaining infrastructure is challenging the adoption of a community demand-driven approach is

protect and enhance the quality of their lands and to sustainably manage surrounding forests. The project sites are in the Sahelian ecological zone characterized by low rainfall, steppe and savanna regions underlain by sandy soils. The most resilient techniques will thus be selected to maintain and improve the quality of topsoil and water quality despite climate change projection. The landscape approach will offer an adequate framework to ensure that investments provide long-term benefits including social and environmental standards.

B. Baseline or Business as Usual (no GEF Scenario)

6. The baseline is a US\$80 million standard IDA-funded agricultural development project (SSIAP) that would not address alone the risks of land degradation and deforestation. The Project Development Objective is to develop inclusive commercial agriculture and sustainable land management in project areas. This will be done through investments in infrastructure, technical assistance to key public institutions and support to the private sector all along the agribusiness value chains. The project intervention zone covers the Saint Louis and Louga regions in Northern Senegal. The baseline project will include the following three components.

7. Component 1: Support to Sector Actors (US\$9.5 million). This component will support up to nine rural communities⁷¹ in Northern Senegal (Saint Louis and Louga regions) through technical assistance to ensure that land user rights are allocated to private operators. It also consists in the provision of vocational training and applied research to farmer associations, SMEs and agriculture business associations. Finally, it includes support to the rehabilitation of the Agropole and the land management process.

8. Component 2: Development of Irrigation Infrastructure and Sustainable Natural Resources Management (US\$64.5 million). This component will finance public irrigation infrastructure in the Ngalam Valley and around the Lac de Guiers. This will include the design, construction and equipment of critical primary irrigation infrastructure and secondary canals. It will also support the provision of matching grants to small-scale farmers and SMEs for the establishment of tertiary irrigation systems as well as inputs packages for smallholders. Implementation of secondary and tertiary works will start only after the land users' rights allocation process under component 1.1 is completed.

9. Component 3: Project Coordination, Management, Communication, Monitoring and Evaluation (US\$6 million). The subcomponent will finance equipment, consultant compensation, operating

considered as success factor.” – Ownership and participation from local communities are at the center of the project’s design and implementation arrangements. (ii) “Transparency and good governance are important at the grassroots level. - The project will support a highly transparent and participatory approach including significant capacity building support to strengthen community engagement in sustainable agriculture, water and forest management. (iii) “Planning M&E to ensure that baseline studies are completed on time with required data”. – The project’s results framework has been carefully designed to ensure realism and attribution particularly and complement/feed into the GEF tracking tools. Baseline data is available. (iv) “Gender-sensitive teams and strong female leadership among beneficiaries are driving forces in building the gender dimension of a project”. – The project recognized the importance of a gender sensitive approach and will ensure that implementation at all levels will respond to the technology needs of men and women alike.

⁷¹ Four rural communities in Department Dagana in Saint Louis Region: Ngnith, Diama, Ronkh, Mbane. Three rural communities in Department Saint Louis in Saint Louis Region: Fass Ngom, Ndiebene Gandiole, Gandon and two rural communities in Department of Louga in Louga Region: Keur Momar Sarr and Syer.

costs (including rent), organizational and systems development, training, capacity building, and technical assistance to the Project Coordination Unit (PCU) to be located in St Louis. It will also finance the Monitoring of the project including technical assistance to the institutions in charge of the monitoring arrangements and the implementation of an impact evaluation that will assess the impact of the overall project and of specific key outputs. Finally, the component will support continuous communication and consultation with the local population as well as the documentation and dissemination of lessons learned so as to facilitate the replication of successful solutions in other regions in Senegal and countries.

C. GEF Alternative

10. GEF funds in combination with IDA will be used to support sustainable intensification of agriculture on high-potential land (horticulture) with restoration of forested landscapes and use of SLM-friendly technologies at large, medium, and small-farming scale. Focus of GEF support will be inclusion of SLWM principles in selection method for investors, training and monitoring.

11. The GEF Alternative will build on and strengthen the baseline scenario by covering incremental costs associated with: (i) technical assistance for farmer communities in order to adopt sustainable land and water management (SLWM) practices following a landscape approach; (ii) capacity building and technical assistance to local stakeholders for incorporation of environmentally sound criteria in the agribusiness and land transfer negotiations with private investors; (iii) community-led management plan of classified forests and reserves which generate important ecosystem services; and (iv) monitoring of key environmental indicators. The project will develop and implement inclusive and sustainable solutions, in particular with respect to community-driven land and water management systems, which will be scalable and replicable in other regions of Senegal. The project design was informed and its implementation will be guided by lessons learned from previous similar initiatives in the country, in particular the GEF4 SLM project particularly related to the sub-component 1.1 and 2.3 (annex 10).

12. SLWM adopted in this proposal involves the incorporation of the landscape approach that, through appropriate management practices, enables land users to maximize the economic and social benefits from the land while maintaining or enhancing the ecological support functions of the land resources. It involves a holistic approach that integrates social, economic, physical and biological assets from agricultural land to forestland and protected areas (see annex 10).

13. In the project intervention area, the main causes for degradation of agriculture lands are wind erosion, salinization of land and the loss of fertility. GEF funds will address the risk of soil salinization and erosion through promoting an integrated approach to maintain and enhance organic matter/carbon content in the soil and above ground biomass, participatory multipurpose management of forests and woodlands contributing to reduce GHG emissions and sequester carbon. Appropriate practices for SLWM can be windbreaks (including those made of trees that will also improve crop productivity) to slow the wind down and limit the effects of wind erosion, cover crops to avoid bare soil, no-till or minimum tillage crops, and water efficient irrigation techniques are area where the risk of salinization is high. In addition, the GEF support for natural regeneration and reforestation around the irrigated perimeters on the shores of Lac de Guiers will reduce water loss and siltation problems and therefore reinforcing agricultural production.

14. The SLWM and Sustainable Forest Management (SFM) project target areas cover around 40,000 hectares. Reforestation, if appropriately planned, can reduce irrigation needs and render irrigation systems more effective. Further, trees surrounding fields serve as windshield and improve agricultural productivity. The selection of reforestation sites will be done as a joint effort bringing together rural community members, technical experts, and investors. Species will be selected based on their capacity related to drought, wind and soil erosion resilience, and preferably native species. *Faidherbia albida*, *Piliostigma reticulatum*, *Gulera senegalensis* or *Moringa oleifera* have been proposed as suitable tree species but the final choice will be made by the farmer/investor in view of specific purposes and priorities. It should be noted that GEF would not directly fund reforestation (except demonstration projects at small-holder level).

15. The incremental activities that will constitute the components of the project to be financed by the GEF Alternative are the following:

- Demonstration and adoption of techniques for sustainable land management (US\$2.5 million). During feasibility studies to be carried out under component 1.1., site-specific risks of land degradation and identification of best adapted SLWM practices will be identified. Technical assistance to smallholders will help the adoption of sustainable land and water management techniques within the concession agreement between the rural communities and the agribusiness investors. The support will also contribute to empower community organizations during the negotiation process and ensure that environmentally sound criteria and SLWM practices are adopted by agribusiness partners. The terms of such negotiations will promote increase in agricultural productivity while preventing the risk of land degradation. This activity is included within subcomponent 1.1 of the blended project. Although there is no dedicated GEF financing in component 1.2, capacity strengthening supported by IDA will also include SLWM aspects.
- Protection of classified forests and natural reserves (US\$3.0 million) in and around the agribusiness development area. Technical assistance to the National Great Green Wall Agency (ANGMV), the Regional Inspection of Water and Forests as well as the Regional Division of Environment and Classified Establishments (all under the Ministry of Environment) will be provided. Technical assistance will also be delivered to prepare participatory management plans of the classified forests and reserves⁷² based on a consultative diagnosis as a way to anticipate and manage changes to livestock's routes (turning cattle land into irrigated land) and increase in human pressure as a result of other project's components.⁷³ Equipment will be provided as needed to support the protection and better management of these highly valuable habitats. The project will finance investments to delineate forest boundaries and protect natural regeneration of selected

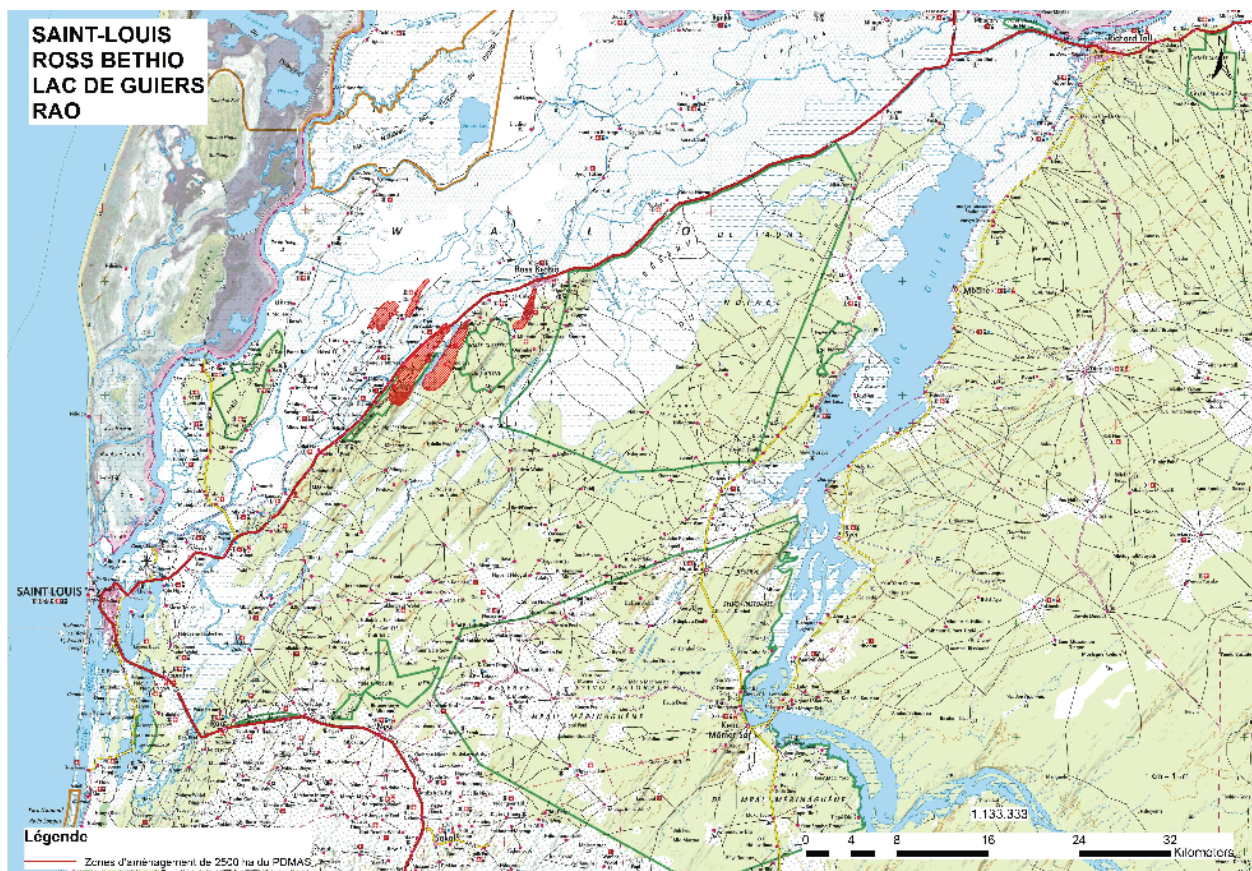
⁷² The classified forests of Rao, Keur Mbaye, Mpal, Maka Diama, Naere, Ndiaw, Thilene, the Sylvo Pastoral Reserve of Mpal Merinaghen, and the Fauna Reserve of Ndiael.

⁷³ Forests and areas classified in the region provide an important reserve of fuelwood, fodder for livestock and other forest products like timber, which may be affected by the expansion of irrigated land. With the project, herders will be associated to upstream discussions and to the preparation of management plan of surrounding forests and sylvo-pastoral reserves. If successful, the project is likely to attract more immigrants in the areas, which will likely result in an increased pressure on surrounding natural resources, which will be managed through participatory management plans and strengthened capacity of decentralized services of the Ministry of Environment.

species,⁷⁴ which will help to shelter surrounding lands from the winds. It will further finance the development and maintenance of firebreak trails, which will improve access for communities and newly developed agricultural areas. (Subcomponent 2.2 of the blended project).

- Monitoring and impact evaluation implementation (US\$0.5). The GEF Alternative will focus on capacity building for the implementation of the impact evaluation as regards to key environmental indicators as well as strengthening environmental monitoring on the basis of the GEF tracking tools for land degradation, climate change mitigation and forest management (part of subcomponent 3.2 of the blended project) and evaluation of existing data (see LADA study) while seeking monitoring and knowledge exchange support from SAWAP regional BRICKS initiative.

Map showing intervention sites financed by IDA and GEF (green perimeters of forest reserves).



⁷⁴ Recommended species include *Acacia (Faidherbia) albida*, *Piliostigma reticulatum*, *Guiera senegalensis*, *Moringa oleifera*, *Cordyla pinnata*, *Parkia biglobosa*. Tree species, which at the same time stop wind erosion and fix sand dunes, are *Cuarina equisetifolia*; species to reclaim salted lands are *Eucalyptus*. Other tree species supportive to manage natural regeneration include *Borassus aethiopicum*.

D. Fit with GEF Strategic Priorities and International Framework

16. The project will be developed using a multi-focal area strategy to help ensure good integrated ecosystem management approaches to help secure a robust mix of primary and secondary ecosystem services from the project area. The GEF Strategies for land degradation, mitigation to climate change and sustainable forest management provide the background for this project:

17. Land Degradation (US\$ 3.2 million). The project is aligned with the GEF-5 strategic objectives for the land degradation focal area, specifically with objective LD-3, “Integrated Landscapes”. The project will address pressures from competing and unsustainable uses on targeted landscapes currently reducing soil fertility and increasing water pollution. Support offered by the project for demonstration of sustainable land and water management techniques is aligned with the core output of disseminating information on integrated natural resource management technologies and good practices. Capacity building and support to local communities to adopt sustainable land and water management practices and to reduce pressures on natural resources is contributing to the goals of the LD focal area. The adoption of the SLWM techniques by local communities will ensure maintenance of ecosystem services that are important both for the global environment and peoples’ livelihoods.

18. Climate Change – Mitigation (US\$ 1.4 million). Senegal has experienced significant climate variability in the past. Climate change in the form of periodic drought and generally declining precipitation has been found to result in reduced yields and increased severity of bushfires.

19. The main drivers behind increased Greenhouse Gas (GHG) emissions in the project intervention area relate to agriculture⁷⁵ and deforestation but also to land degradation due to reduced above ground biomass and reduced soil carbon. As severity of degradation increases, erosion is likely to increase, resulting in a decrease of the carbon sequestration potential.

20. Generally, improved land management systems that contribute to resilient climate change mitigation coupled with productivity enhancement are expected to accumulate greater carbon in agricultural land and forests. Soil fertility restoration measures will prevent soil carbon stock losses. Agroforestry/tree planning around fields will increase in carbon stock. Crop diversification (intercropping) improves soil carbon. Application of integrated improved plant nutrients improves soil carbon sequestration. Improved management of pastoral resources results in less vegetation and soil degradation and thus increases carbon sequestration.

21. The national estimation of the scale of land clearing and forest degradation has been used to define baseline scale of the problem in the project intervention areas as documented in the GEF tracking tools. According to the FAO,⁷⁶ irrigation is recommended to increase the amount of carbon in soil in drylands. In small-scale irrigation systems, a high potential for carbon sequestration arises from the supply of water that allows high primary productivity, from slow

⁷⁵ Agriculture is an important source of GHG emissions (32 % of GHG emissions in Senegal). If related land-use change including deforestation for which agriculture is a key driver are considered, the share would be higher. Thus, there is substantial mitigation potential in the agricultural sector. It is estimated that 50 % of the carbon storage potential of Senegal would lie in improved practices in agriculture.

⁷⁶ FAO World Soil Resources Report 102, 2004 Carbon Sequestration in dryland soil.

decay of soil carbon, much of which is bound closely to clay particles, as well as from extensive use of manure, both from animal and crop residues.

22. The above demonstrates that the proposed project is in line with the GEF-5 strategic objectives for the Climate Change - Mitigation focal area. By promoting SLWM practices in and around the agribusiness pole and sustainably managing classified forests and reserves, the project aligns primarily with the GEF objective CCM-5 “Promote conservation and enhancement of carbon stocks through sustainable management of land use, land-use change, and forestry” and particularly outcome 5.2 “Restoration and enhancement of carbon stocks in forests and non-forest lands”. These restoration and enhancement will be monitored using the related GEF tracking tools and inclusion in forest management plan monitoring. The project will prevent deforestation in classified forests and reserves that would have suffered otherwise from increased human pressure through a set of interlinked activities, which will be planned and implemented with the local stakeholders. The avoided deforestation will be the primary source of avoided carbon dioxide emissions. In addition, the adoption of SLWM techniques such as low till will contribute to enhanced carbon sequestration.⁷⁷ However, this will not be quantified during project implementation as carbon monitoring techniques for agriculture are still at pilot stage and tend to be very cost intensive.

23. The implementation manual will include monitoring arrangements based on a FAO developed categorized method of mitigation benefit for agriculture activities using qualitative assessment of carbon sequestration⁷⁸, GHG emission reduction, GHG emission efficiency benefits related to types of activities.

24. Sustainable Forest Management (US\$ 1.4 million). The project will aim at reducing pressures on forest resources and generating sustainable flows of ecosystems services (SFM/REDD+). The project will be implemented following a landscape approach that integrates people's livelihood objectives in the management of the different ecosystems within the target landscape. Within this focal area, the expected project's outcome will be the application of good participatory sustainable management practices in existing nine classified forest and nature reserves contributing to climate change mitigation and adaptation.

25. International Framework. The project responds to recommendations from the UNFCCC Technology Needs Assessment for Senegal (2012) for the agricultural sector. The assessment pointed at two sector priorities on which the project will react: (i) increase of irrigated perimeter

⁷⁷ Soil fertility restoration measures are expected to prevent soil carbon stock losses. Agroforestry/tree planning around fields will increase in carbon stock. Crop diversification (intercropping) is expected to improve soil carbon. Application of integrated improved plant nutrients improves soil carbon sequestration. Improved management of pastoral resources results in less vegetation and soil degradation and thus increases carbon sequestration.

⁷⁸ There are several methodologies available and tested for mitigation measurement in the agricultural sector including in Senegal but no single one has been classified as the only valid methodology in the country and data is only available in form of accumulated national estimates. The current national emission scenario has been used to deduct the expected GHG emission for the project intervention sites. The project proposes to use a qualitative assessment of a combination of carbon sequestration, GHG emission reduction, and GHG emission efficiency due to the nature of the intervention following an approach promoted in a FAO proposal for climate-smart agricultural investment (April 2012). The project will make use of a qualitative combination of carbon sequestration; GHG emission reduction and GHG emission efficiency due to the nature of the interventions addressing land degradation through sustainable land and water management on agricultural land and forest degradation through improved management, awareness, mapping and monitoring.

(goal was to increase from 4% in 2005 to 20 % in 2015); and (ii) improvement of irrigation systems to meet local needs. Among the four priority sector technologies defined, at least two of them are linked to project interventions including assisted natural regeneration and agroforestry. The UNFCCC National Action Plan for Adaption for Senegal (2006) supports this further focusing on agroforestry as primary adaptation measure for the agricultural sector. The UNFCCC Second National Communication (2010) describes new land management methods, burial of crop residues instead of incineration and agroforestry as good practices to reduce the (insignificant) GHG emissions while increasing very high absorption capacity in the agricultural sector. These assessments built on the third national UNCCD report (2004).

E. Incremental value added by GEF funding and Global Benefits

Global Environmental Benefits (GEB)

26. Under the baseline scenario, the capacity of the stakeholders in the project intervention area to tackle land degradation, climate change mitigation and sustainable forest management would be critically low, and the gap between the efforts to address the challenges and the scale of the problem would continue. More importantly, the agribusiness project without GEF support would not focus on addressing land degradation in agricultural practices. The leverage local and global benefits from GEF support addressing multiple interlinked GEF focal area at the different levels (large investors, medium producers, smallholders) to include more sustainable land and water management practices systematically are expected to be significant.

27. The Senegal River Basin ecosystem as the project intervention area is characterized by the following constraints: frequent droughts and decrease in rainfall, salinization, inadequate drainage and excessive use of chemicals in agriculture; invasion of aquatic plants, reduction of pastoral lands due to increased agricultural activities, soil degradation, lack of water points, lack of agroforestry practice in irrigated systems, insecure land tenure, demographic pressure, all contributing to soil loss, change in natural habitats, reduced ecosystem services and loss of biodiversity, high land degradation and reduced natural buffer function to recurrent droughts (and floods). The project will address some of the main recommended actions⁷⁹ including planning and management of classified forests and reserves, soil fertility enhancement, soil erosion protection, sound hydro-agricultural systems and efficient water management.

28. The blended project is a pilot project within the SAWAP portfolio. The expected **global environmental benefits** of the project interventions will include reduced levels of land and forest degradation through improved land and water and forest management techniques resulting in increased vegetation cover thereby increased carbon sequestration and storage.

29. The derived estimated total **carbon benefits** (see table below for methodology) using GEF methodology for LULUCF projects (direct (6 years) and indirect (14 years)) include:

- Reduced deforestation resulting in avoided total CO₂ emissions of 366,662 tons of CO₂
- Enhanced conservation of forest areas resulting in increased total carbon sequestration of 3,666,662 tons of CO₂ equivalent.

⁷⁹Strategic framework paper for SLM (CNIS/GDT). February 2012, Ministère de l'Agriculture/INP, p. 33).

Table: Methodology carbon benefits

The estimated carbon benefits above are developed based on national emission scenario (UNFCCC national communication, FAO statistics, CSE data)⁸⁰ and a conservative estimate of forest area that will benefit from the project's interventions.

The estimation is based on 25,000 hectares of forest to be better conserved and protected from deforestation. This is a very conservative estimate because under the project: (i) 40,000 ha of community forest area will be protected through management plans and will benefit from better community-driven management, (ii) 300 ha of degraded area will be reforested or naturally regenerated.

Senegal loses 0.5% of its forest cover every year. With 25,000 ha under protected status, the project will save 125 ha each year from deforestation. The carbon density in the biomass in Senegal is estimated at 40 t/ha. As a result, 125 ha saved from deforestation is equivalent to 18,333 t of carbon emission not released each year. Over the lifespan of the project (6 years), 110,000 t of CO₂ emissions will be avoided. Beyond the lifespan of the project, over 20 years, the benefit of avoided CO₂ emissions is estimated at 366,662 t.

The growth rate of the forest in Senegal is estimated at 5 m³/ha/year. In metric tonnes, this translates to 4 tonnes/ha/year of additional wood. Wood is assumed to be made of 50% of carbon. With 1 ha of forest better conserved, 2 t of carbon is captured in average each year. Carbon sequestered each year from 25,000 ha of forest better conserved will thus translate into 50,000 t of carbon sequestered each year. The ratio 44/12 should be applied to translate Carbon into CO₂ equivalent. Over the lifespan of the project (6 years), 1,100,000 t of CO₂ will be sequestered and not released. Beyond the lifespan of the project, over 20 years, the CO₂ benefit of sequestered carbon is estimated at 3,666,662 t.

30. The dissemination and implementation of SLWM practices in targeted vulnerable rural communities will contribute to maintain and strengthen delivery of ecosystem services and ensure the overall robustness and resilience of the proposed agricultural systems to climatic shocks. SLWM practices not only will improve soil health and fertility, it will also lead to increased carbon content in the soil. Similarly, while vegetative cover contributes to increased water availability, it also favors improvement of carbon stock in the biomass. Implementation of SLWM practices and improved forest management and protection in classified forests⁸¹ and nature reserves will improve the provision of agro-ecosystem and forest ecosystem goods and services at global, national, and local scale.

31. The following table presents the baseline situation in the classified forests and nature reserves supported by the project.

⁸⁰ <http://rainforests.mongabay.com/deforestation/2000/Senegal.htm>

⁸¹ **Classified Forests.** Senegal has 213 classified forests covering an area of 1,055,700 ha (MEPN, 2005). These forests were classified before 1960 in order to facilitate the protection of fragile soils, the preservation of flora and vegetation (rare and/or diversified) and stockpiling of fuelwood⁸¹. Wood species present in these forests are: *Tamarindus indica*, *Adansonia digitata*, *Acacia raddiana*, *Acacia raddiana*, *Acacia nilotica*, *Acacia Senegal*, *Balanites aegyptiaca*, *Zizyphus mauritiana* and shrubs that have naturally regenerated. Despite their status, all forests are under increasing pressure to provide firewood for a growing population and construction material. They are also subject to slashing and burning for the expansion of new agricultural lands and to the ravages of bushfires. Other factors that threaten the forests are: overgrazing, lack of demarcation and signage, poaching, scarce patrolling and State staff, weak enforcement of regulations, salinization, proliferation of invasive aquatic plants, pollution (discharge garbage, landfills and septic drainage of agricultural residues), and droughts.

Table: Overview of baseline situation in forest and nature reserve project intervention sites surrounding agribusiness zones for interventions supported with GEF funds under component 2.⁸²

Name	CR/Dep.	IUCN category /purpose	Size (ha)	Conservation status	Management issues	Management priority
FC Rao	Gandon Saint Louis	IV Reserve for pastoral use	300	<i>Use:</i> Illegal resource use <i>Degradation driver (DD):</i> Overgrazing and grazing mismanagement	Drought/deficit in rainfall; lack of boundary demarcation; overgrazing hampering natural regeneration; adjacent national road	Management plan exists (2006) but no implementation: conservation measures and reforestation; local procedures; law enforcement.
FC Keur Mbaye	Gae Dagana	IV Sustainable use PA	2725		Part of Richard Toll town is inside FC. Encroachment and degradation.	Restructuring needed: Mapping and boundary demarcation; regeneration support; law enforcement.
FC Maka Diama	Ndiaye Dagana	IV Conservation PA Bufferzone of Transfrontier Biosphere Reserve of Senegal River Delta	2290	<i>Encroachment:</i> high pressure from adjacent villages <i>Use:</i> Illegal wood collection for charcoal production; removal of vegetation	Lack of boundary demarcation. 200 ha are fenced as regional forest.	Boundary definition and demarcation; rehabilitation to protect habitat for warthog; regeneration support; Microproject implementation under the program "COMPACT".
FC Mpal	Mpal Sait Louis	IV Reserve for pastoral use Bufferzone of Transfrontier Biosphere Reserve of Senegal River Delta	3202	<i>Encroachment:</i> 40 ha declassified for Agropole, agricultural expansion of cropped area. <i>Use:</i> Illegal wood and vegetation removal <i>DD:</i> Overgrazing	Drought and deficit in rainfall; erosion; demarcation; overgrazing hampering natural regeneration; adjacent national road	Boundary remapping and sensitizing adjacent population; rehabilitate 40 ha declassified to avoid encroachment; law enforcement.
FC Naere	Ross Bethio Dagana	IV Conservation PA	1600	<i>Encroachment:</i> expansion of cropped area	High degradation with lack of vegetation. Lack of boundaries and demarcation. Agricultural encroachment.	Participatory management with local authorities to be developed; regeneration support.
FC Ndiaw	Ronkh commune Richard Toll Dagana	IV Sustainable use PA	390		Part of Richard Toll town is inside FC. Polluted area due to sewage water presence.	Restructuring needed: Protection measures for water pollution; law enforcement.
FC Thilene	Ross Bethio Dagana	IV Conservation PA Bufferzone of	2000	<i>Encroachment:</i> agricultural fields	Lack of boundaries and demarcation.	Boundary definition and demarcation; regeneration support; law

⁸² Ministère de l'Environnement et de la Protection de la Nature des Bassins de Retention et Lacs des Artificiels: Les Aires Protegées au Senegal: Les Aires Protegées de la region de Saint-Louis, DPT de Saint-Louis et DPT de Dagana.

		Transfrontier Biosphere Reserve of Senegal River Delta				enforcement; Microproject implementation under the program "COMPACT".
RSF Ndiael ⁸³	NGnith Dagana	I and VI Conservation PA (Ramsar site central point of Transfrontier Biosphere Reserve of Senegal River Delta)	26550	Reserve is under serious threat (on Montreux list for endangered Ramsar sites).	Hydroagriculture infrastructure impacting water levels (very low/no water); demand on land, invasive aquatic plants in irrigation channels; loss of fauna.	Participatory management of periphery: Access to water inflow (removal of Ndiael drain).
RSP Mpal Merinaghen	Mpal Saint Louis	VI Reserve for pastoral use	5600 + 65 (dep. Louga)	<i>Encroachment:</i> agricultural fields <i>Use:</i> Illegal wood and vegetation removal and pruning	Drought/deficit in rainfall, bush fires, illegal forest product use, overgrazing, erosion and difficult natural regeneration	Need to develop a management plan: Law enforcement.
Total:			44722			

Link with the Sahel and West Africa Program in support of the Great Green Wall Initiative

32. The GEF Alternative will support an emerging priority in support of Africa's drylands sustainable development, whereby solutions to unlock the drylands' growth potential and to better manage shocks and vulnerability to climate change are brought together. The project falls under the Sahel and West Africa Program (SAWAP) in support of the Great Green Wall that was approved by the GEF Council in May 2011. The SAWAP addresses major issues related to land degradation, including food security, climate change mitigation and adaptation, to support sustainable development in 12 Sahel countries including Senegal⁸⁴.

33. The proposed project will directly contribute to the following regional SAWAP portfolio level key performance indicators:

⁸³ The Reserve was created in 1965 mainly for the protection of wildlife. It is an alluvial basin of impermeable, saline soil in the Senegal River floodplain, located in the Dagama Department. Annual grasses and Acacia scrub dominate the vegetation. The natural hydrology of the region was transformed in the 1960s to improve conditions for agriculture, and it was subsequently aggravated by long periods of severe drought. These changes led to the site being listed on the Montreux Record (Ramsar Site in Danger) in 1993. The surrounding area supports traditional fishing and rice cultivation. The Reserve is a Ramsar Avifauna site since 1971 and since 2005 it is one of the central cores of the Transboundary River Delta Biosphere Reserve. An ADB/GEF project (PRRELAG) to restore and rehabilitate the Reserve is currently under preparation with one key expected output being the withdrawal from the Montreux Record. A coordination scheme with the ADB project will be established particularly to reinforce capacity building for technical service providers as water and forest authorities and local communities including producer organizations.

⁸⁴ The projects of the SAWAP address major challenges common across the region related to land degradation, biodiversity, sustainable forest management, mitigation and adaptation to climate change. Through an integrated landscape approach and addressing economic issues such as food security and vulnerability, the SAWAP can support sustainable development across the Sahel region, from the Atlantic to the Indian Ocean including Burkina Faso, Chad, Ethiopia, Mali, Mauritania, Niger, Nigeria, Senegal, Sudan, Benin, Togo, and Ghana.

KPI 1. Increase in land area with SLWM practices in targeted areas, compared to baseline (hectares, reported by crop, range, forest, wetlands, protected areas)

KPI 2. Changes in vegetation cover in targeted areas, compared to baseline (hectares)⁸⁵

KPI 4. Change in carbon accumulation rates in biomass and soil, compared to baseline (tC/ha)

Incremental Cost Calculations

34. The GEF grant of US\$6.0 million will blend with a six-year US\$80 million Investment Project Financing (IPF) . Joining with a financial investment of larger scale will maximize the impact of the GEF support in particular through the technical assistance that will promote adoption of SLWM practices by local communities and agribusiness firms. The number of beneficiaries is significantly greater than if the GEF resources were supporting a stand-alone operation. By blending with a large financial operation, the leveraging capacity increases significantly.

⁸⁵ Vegetation cover is considered as a proxy for terrestrial ecosystem health including cropland, rangeland, forest/woodlands, and hydrological flows.

Matrix of GEF Incremental Costs

Component	Category	Estimated Expenditure (million US\$)	National and local benefit	Global Environmental Benefit (GEB)
1: Support to sector actors	Baseline	9.5	Allocation of land to private investors in an inclusive, transparent, competitive, and sustainable way. Increased capacity of stakeholders along the agribusiness value chain. Empowerment of rural communities with respect to land reform.	No global environmental benefits.
	With GEF alternative	12	GEF is acting as a catalyst to guide and mainstream SLWM into agribusiness contracting and monitoring (promoting SLWM practices and incorporating environmental criteria in the agribusiness negotiations/contracts between rural communities and private investors). Increased awareness/knowledge about SLWM practices, incorporated under a landscape approach and disseminated to communities and land users (farmers at various levels). Through implementation of SLWM practices ⁸⁶ , mitigation of drought impacts, land degradation, wind erosion, and other env. problems. Empowerment of rural communities with respect to sust. land and water managem.	Improved capacities on SLWM will create global environmental benefits such as increased vegetation cover thereby leading to enhanced carbon stocks, improved provision of agro-ecosystem and forest ecosystem goods and services, reduction of vulnerability of agro-ecosystem and forest ecosystems to climate change and other human-induced impacts.
	Incremental	2.5		
2: Development of irrigation and natural resources management	Baseline	64.5	Improved water availability for agricultural needs through public irrigation infrastructure. Integrated water management approach implemented in the region.	Very limited due to contribution to increased carbon storage in irrigated areas.
	With GEF alternative	67.5	Improved capacity of decentralized env. institutions in NRM. Participatory man. plans for classified forest and reserves in place and priority activities implemented. Preservation of livelihoods of people dependent on the use of forest resources (including fodder for livestock, dietary supplement and firewood collection for neighboring communities). Prevention of land degradation through anti-erosion schemes.	Sustainable management and protection of classified forests and natural reserves will promote provisioning of forest ecosystem services including terrestrial carbon storage and sequestration, conservation of biodiversity.
	Incremental	3.0		
3: Coordination, impact monitoring and evaluation	Baseline	6.0	Improved project man., communications and monitoring of results for progress and impact Knowledge notes on SLWM experiences in project zone shared with SAWAP BRICKS.	No global environmental benefit
	With GEF alternative	6.5 ⁸⁷	Improved monitoring and impact evaluation capacity for key environmental indicators.	Improved availability of and access to knowledge on SLWM practices.
	Incremental	0.5		
TOTAL	Baseline	80.0		
	With GEF alternative	86.0		
	Incremental	6.0		

⁸⁶ Examples are windbreaks (including those made of trees which contribute further to increased crop productivity); agro-forestry, cover crops; no-till or minimum tillage crops; and water efficient irrigation techniques where salinization is high.

⁸⁷ This includes US\$0.5 million from the baseline financial resources as an advance for project preparation.

Annex 11: Documents in project files

REPUBLIC OF SENEGAL: Sustainable and Inclusive Agribusiness Project

1. Bank Documents related to the project

- Project Information Document (Concept Stage), April 6, 2011.
- Integrated Safeguard Data Sheet (Concept Stage), April 6, 2011.
- Mission de préparation du Projet Communautaire De Gestion Durable des Terres au Sénégal (P130271) (18 mai – 01 juin 2012)
- Project Concept Note, July 21, 2012.
- Aide Mémoire de la Mission d'évaluation pour le projet de développement inclusif et durable de l'agribusiness au Sénégal (PDIDAS) (September 24-October 5, 2012) Decision Note, Decision Review of September 25, 2012 (Oct 11, 2012)
- Aide Mémoire de la Mission d'évaluation pour le projet de développement inclusif et durable de l'agribusiness au Sénégal (PDIDAS) (December 2012)

2. Reference Documents

- CSE, 2011, Outils de gestion durable des terres au Sénégal : Contribution de LADA. Rapport. Republic of Senegal, 2002, Fiches Techniques pour l'Elaboration du Plan d'Orientation pour le Développement Economique et Social 2002 – 2007.
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Figure 7: Senegal Agribusiness Pole: in solid line: existing agricultural developments, in dashed line: proposed project interventions

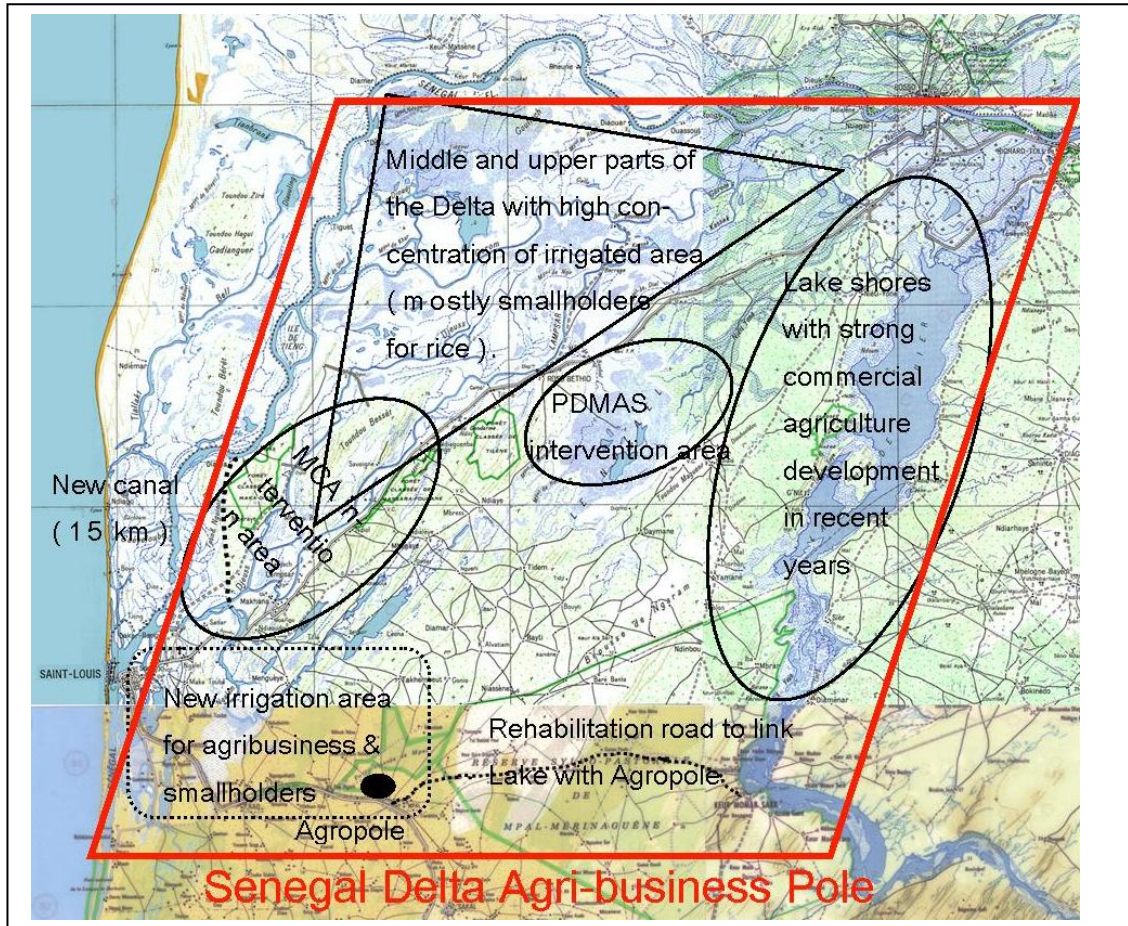
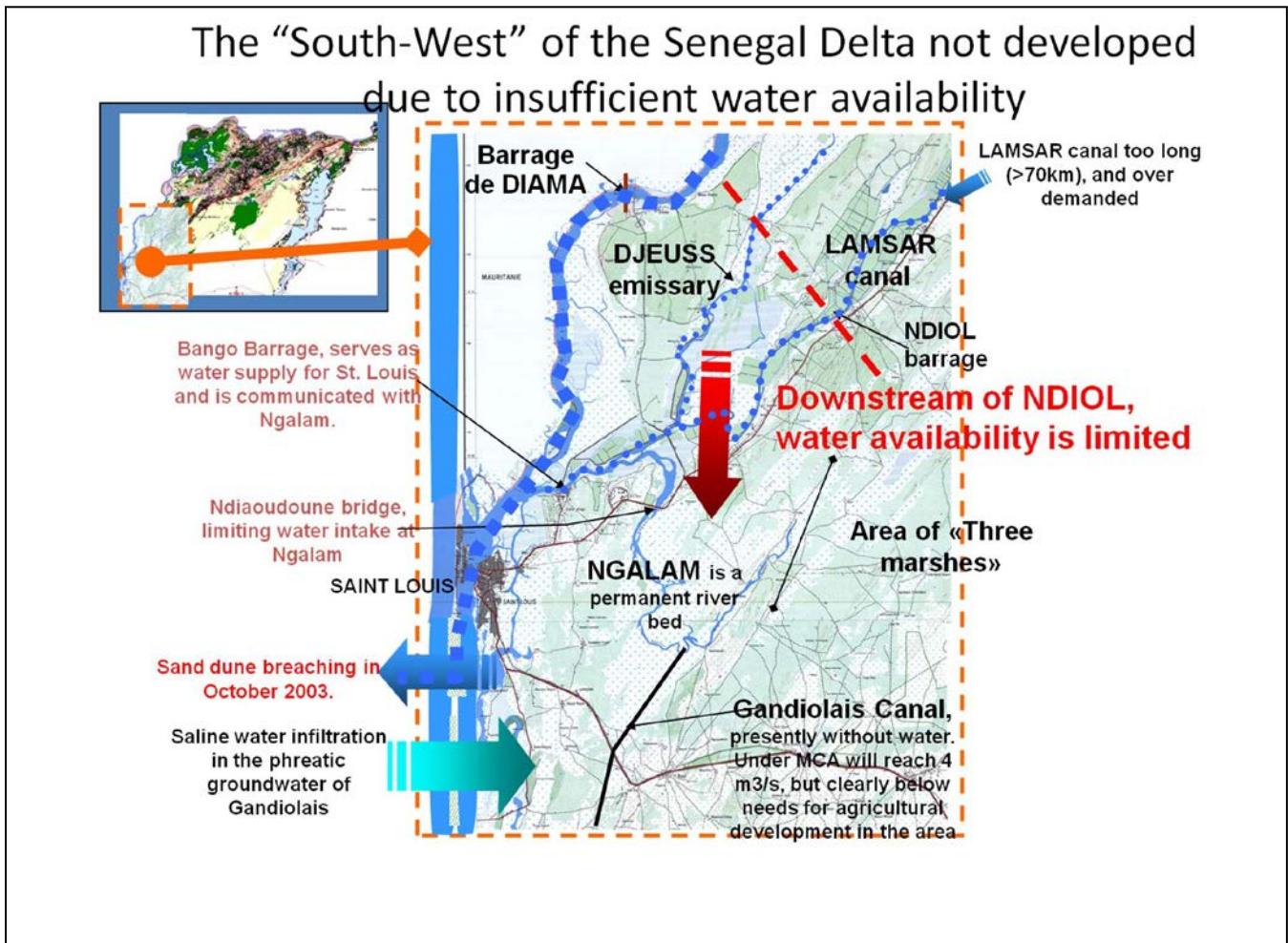
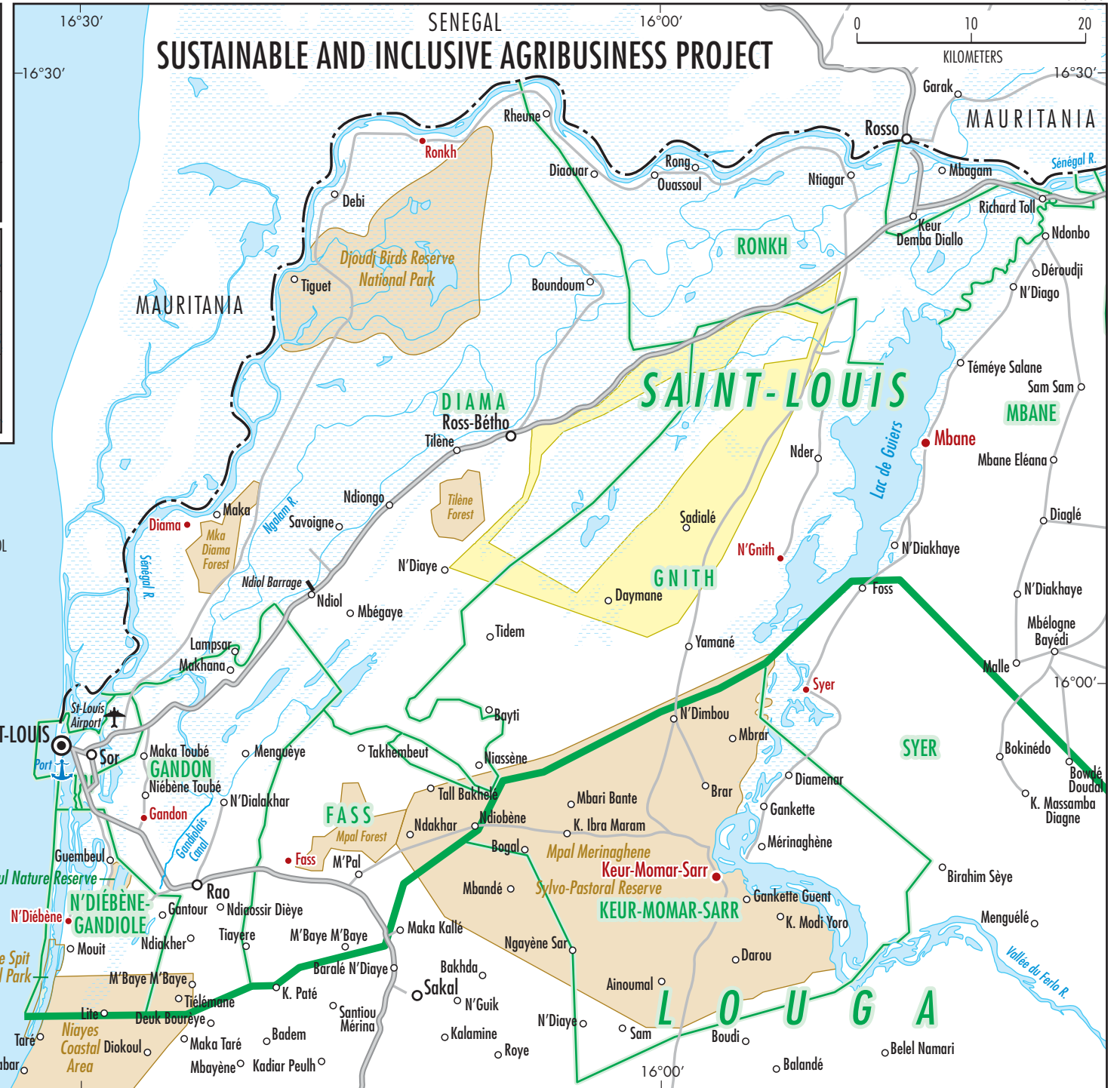
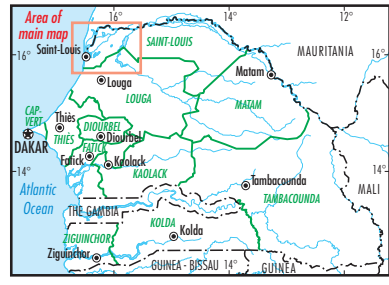


Figure 8: Scarce water resources in the Senegal River lower delta





- Diama • PROJECT RURAL COMMUNITIES
- PLANNED AREA OF SENHUILE-SENETHANOL AGRIBUSINESS PROJECT
- PARKS AND RESERVES
- WETLANDS
- MAIN ROADS
- SECONDARY ROADS
- CITIES AND TOWNS
- REGION CAPITAL
- RURAL COMMUNITY BOUNDARIES
- REGION BOUNDARIES
- INTERNATIONAL BOUNDARIES

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