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Report No: PPIAF000341

INTERNATIONAL DEVELOPMENT ASSOCIATION

PROJECT PAPER

ON A

PROPOSED ADDITIONAL CREDIT

IN THE AMOUNT OF EUR 119.6 MILLION

(US$140.0 MILLION EQUIVALENT)

TO THE

REPUBLIC OF SENEGAL

FOR THE

ENHANCING CONNECTIVITY IN THE NORTHERN AND CENTRAL AGRICULTURAL PRODUCTION AREAS OF SENEGAL PROJECT

JUNE 10, 2026

Transport and Logistics Global Practice

Western and Central Africa Region

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CURRENCY EQUIVALENTS

(Exchange Rate Effective April 30, 2026)

Currency Unit =	FCFA (Western Africa Franc)
EURO 0.854 =	US$1.00
FCFA 559.93 =	US$1.00

FISCAL YEAR
January 1 - December 31

Regional Vice President:	Ousmane Diagana
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ABBREVIATIONS AND ACRONYMS

AF	Additional Financing
AGEROUTE	Road Works and Management Agency (*Agence des Travaux et de Gestion des Routes*)
AM	Accountability Mechanism
ANASER	National Agency of Road Safety (*Agence Nationale de Sécurité Routière*)
ANSD	National Statistics Agency (*Agence Nationale de la Statistique et de la Démographie*)
CERC	Contingent Emergency Response Component
CETUD	Dakar Urban Transport Council (*Conseil Exécutif des Transports Urbains Durables*)
CPF	Country Partnership Framework
CY	Calendar Year
DA	Designated Account
DGIRD	General Directorate of Road Infrastructure and Rural Connectivity (*Direction Générale des Infrastructures et du Désenclavement*)
DGTR	General Directorate of Road Transport (*Direction Générale des Transports Routiers*)
E&S	Environmental and Social
EIRR	Economic Internal Rate of Return
ESCP	Environmental and Social Commitment Plan
ESF	Environmental and Social Framework
ESIA	Environmental and Social Impact Assessment
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plan
ESS	Environmental and Social Standards
FERA	Autonomous Road Maintenance Fund (*Fonds d'Entretien Routier Autonome*)
FM	Financial Management
FY	Fiscal Year
GBV	Gender-based Violence
GDP	Gross Domestic Product
GHG	Greenhouse Gas
GNI	Gross National Income
GoSN	Government of Senegal
GRM	Grievance Redress Mechanism
GRS	Grievance Redress Service
HDM	Highway Development and Management Model
IBRD	International Bank for Reconstruction and Development
IDA	International Development Association
IFC	International Finance Cooperation
IFR	Interim Financial Reports
IP	Implementation Progress
IPF	Investment Project Financing
IRI	International Roughness Index

ISR	Implementation Status and Results Report
Km	Kilometers
LMIC	Lower-Middle Income Country
LMP	Labor Management Procedures
LNR-BTP	National Reference Laboratory for Buildings and Public Work
LPI	Logistics Performance Index
M&E	Monitoring and Evaluation
MASAE	Ministère de l'Agriculture, de la Souveraineté alimentaire et de l'Éle
MI	Ministry of Infrastructure (*Ministère des Infrastructures)*
MTTA	Ministry of Land and Air Transport *(Ministère du Transport Terrestres et Aérien)*
NGO	Non-Governmental Organization
NPV	Net Present Value
NRHMP	Senegal 2020-2035 National Road and Highway Master Plan
OHS	Occupational Health and Safety
PBC	Performance-Based Condition
PCZA	Enhancing Connectivity in the Northern and Central Agricultural Production Areas of Senegal (*Projet de la Connectivité des Zones de production Agricoles dans le Nord et le Centre du Sénégal*)
PDO	Project Development Objective
PIU	Project Implementation Unit
PPSD	Project Procurement Strategy for Development
RAP	Resettlement Action Plan
RN1	National Road 1 (*Route Nationale 1*)
RPF	Resettlement Policy Framework
RSSAT	Road Safety Screening and Appraisal Tool
SEA/SH	Sexual Exploitation and Abuse/Sexual Harassment
SEP	Stakeholder Engagement Plan
SPC	Shadow Price of Carbon
SUW	Scale-up Window
US$	Dollars of the United States of America

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OPERATION INFORMATION

BASIC DATA - MAIN

Product Information - Enhancing Connectivity in the Northern and Central Agricultural Production Areas of Senegal Project (P176419)

Operation ID P176419	Product/Financing Instrument Investment Project Financing (IPF)
Task Team Leaders Hatem Chahbani	
Beneficiary Country/Countries Senegal	Geographical Identifier Senegal
Requesting Unit AWCF1 (6550)	Responsible Unit IAWT4 (9978)
Approval Date 16-Mar-2022	Closing Date 31-Dec-2027
Practice Area (Lead) Transport and Logistics	Approval Fiscal year 2022
Environmental and Social Risk Classification (ESRC) Substantial	
Is there collaboration between Bank and IFC? No	
Implementing Agency Road Works and Management Agency (Agence des Travaux et de Gestion des Routes, AGEROUTE)	

IMPLEMENTATION MODALITIES – MAIN

Situations of Urgent Need of Assistance or Capacity Constraints

[ ] Fragile State(s)	[ ] Fragile within a non-fragile Country
[ ] Small State(s)	[ ] Conflict

[ ] Responding to Natural or Man-made Disaster	
Other Situations	
[ ] Financial Intermediaries (FI)	[ ] Series of Projects (SOP)
[ ] Performance-Based Conditions (PBCs)	[✓] Contingent Emergency Response Component (CERC)
[ ] Alternative Procurement Arrangements (APA)	[ ] Hands-on Expanded Implementation Support (HEIS)

OPERATION STATUS

Development Objective (DO)

Current Development Objective (Approved as part of Additional Financing package on 05-Jun-2023)

The Project Development Objective (PDO) is to enhance resilient road connectivity in selected agricultural areas of Senegal and to support road safety institutional capacity development in Senegal.

Key Information from Last ISR

Operation Ratings

NAME	IMPLEMENTATION				LAST ISR RATINGS
	21-Oct-2023	09-May-2024	20-Jan-2025	06-Aug-2025	20-Mar-2026
Progress towards achievement of PDO	Satisfactory	Satisfactory	Satisfactory	Satisfactory	Satisfactory
Overall Implementation Progress (IP)	Satisfactory	Satisfactory	Moderately Satisfactory	Moderately Satisfactory	Moderately Satisfactory
Overall Risk	Substantial	Substantial	Substantial	High	Substantial
Overall ESS Performance			Moderately Satisfactory	Moderately Satisfactory	Moderately Unsatisfactory
Financial Management	Satisfactory	Satisfactory	Satisfactory	Satisfactory	Moderately Satisfactory
Project Management	Satisfactory	Satisfactory	Satisfactory	Satisfactory	Satisfactory
Counterpart Funding	Satisfactory	Satisfactory		Satisfactory	Satisfactory
Procurement	Satisfactory	Satisfactory	Satisfactory	Satisfactory	Satisfactory

Monitoring and Evaluation	Satisfactory	Satisfactory	Satisfactory	Satisfactory	Satisfactory

Disbursement Summary (in USD million)

Source of Funds	Net Commitment	Disbursed	Undisbursed	% Disbursed
IBRD	--	--	--	0
IDA	468.54	205.00	125.39	43.75
Grants	--	--	--	0

BASIC DATA – ADDITIONAL FINANCING

Additional Financing No. 2

Additional Financing Type

[✓] Activities are being added to expand the scope of the operation, perhaps in geography or in outputs (Scale-up)

[ ] The operation has incurred increased costs due to inflation, exchange rate changes, and factors that were not anticipated at appraisal (Cost-overrun)

[ ] The operation has experienced shortfalls in co-financing, counterpart financing, or cost recovery that were anticipated at appraisal but did not materialize. (Financing gap)

[ ] The design of the operation has changed, and the new designs cost more than the original ones (Change in Project Design)

Expected Approval Date	Review Type/Corporate Review Level
14-Jul-2026	Regular Decision Meeting (DM)
Will consulting services be required?	**Is this an Urgent Need or Capacity Constraint request?**
No	No

IMPLEMENTATION MODALITIES – ADDITIONAL FINANCING

Situations of Urgent Need of Assistance or Capacity Constraints

[ ] Fragile State(s)	[ ] Fragile within a non-fragile Country
[ ] Small State(s)	[ ] Conflict

[ ] Responding to Natural or Man-made Disaster	
Other Situations	
[ ] Financial Intermediaries (FI)	[ ] Series of Projects (SOP)
[ ] Performance-Based Conditions (PBCs)	[✓] Contingent Emergency Response Component (CERC)
[ ] Alternative Procurement Arrangements (APA)	[ ] Hands-on Expanded Implementation Support (HEIS)

COSTS & FINANCING

Summary (Total Financing in US$, Millions)

	Last Approved	Proposed	
		Additional	Total
Total Operation Cost	328.80	142.00	470.80
Total Financing	328.80	142.00	470.80
Of which IBRD/IDA	317.00	140.00	457.00
Financing Gap	0.00		0.00

Financing Details (in US$, Millions)

Source	Last Approved	Proposed	
		Additional	Total
Counterpart Funding	**2.00**	**2.00**	**4.00**
National Government	2.00	2.00	4.00
International Development Association (IDA)	**317.00**	**140.00**	**457.00**
IDA Credit	317.00	140.00	457.00
Commercial Financing	**9.80**	**0.00**	**9.80**
Commercial Financing Guaranteed	0.00	0.00	0.00
Unguaranteed Commercial Financing	9.80	0.00	9.80
Total Financing	**328.80**	**142.00**	**470.80**

IDA Resources (in US$, Millions)- Additional Financing

	Credit	Grant	SML	Guarantee	Total
Senegal	140.00	0.00	0.00	0.00	140.00
National Performance-Based Allocations (PBA)	140.00	0.00	0.00	0.00	140.00
Scale-Up Window (SUW)	0.00	0.00	0.00	0.00	0.00
Total	**140.00**	**0.00**	**0.00**	**0.00**	**140.00**

SYSTEMATIC OPERATIONS RISK- RATING TOOL (SORT)

Risk Category	Last Approved Rating (ISR Seq. 07) Package - 20 Mar 2026	Proposed Rating
Political and Governance	Substantial	Substantial
Macroeconomic	Substantial	Substantial
Sector Strategies and Policies	Moderate	Moderate
Technical Design of Project or Program	Moderate	Moderate
Institutional Capacity for Implementation and Sustainability	Moderate	Moderate
Fiduciary	Moderate	Moderate
Environment and Social	Substantial	Substantial
Stakeholders	Moderate	Moderate
Overall	Substantial	Substantial

CLIMATE

Climate Change and Disaster Screening

Has this operation been screened for short-term and long-term climate change and disaster risks?

Yes, it has been screened and the results are discussed in the Appraisal Document

Where risks exist, have potential resilience-enhancing measures been identified in the appraisal document?
Yes
Does this operation address specific risks, vulnerabilities, gaps or needs with respect to Climate Change that are identified in the SCD or the CPF?
Yes

Greenhouse Gas Emissions Accounting and Shadow Price of Carbon

Net Emissions (economic lifetime, tCO2e)	Net Emissions (annual average, tCO2e/year)	Gross Emissions (economic lifetime, tCO2e)
345111.0000000000	14380.0000000000	1248781.0000000000

Has the operation applied the Shadow Price of Carbon in the Economic Analysis?
SPC-Low,SPC-High

POLICY COMPLIANCE

Does the operation depart from the CPF in content or in other significant respects?	No
Does the operation require any waivers from Bank policies?	No

TEAM

Core Team

Name	Role	Specialization in this operation	ADM Responsible?
Hatem Chahbani	Team Leader	Transport Specialist	Yes
Ahohouindo Mongnihoude Jean L Gbaguidi	Financial Management Specialist	Financial Management Specialist	Yes
Ndeye Fatou Mbacke	Procurement Specialist	Procurement Specialist	Yes
Kouami Hounsinou Messan	Procurement Specialist	Procurement Coordinator	No
Djibril Diagne	Procurement Specialist	Procurement Consultant	No
Ahmed Fall	Environmental Specialist	Environmental Specialist	Yes

Mamadou Moustapha Ndoye	Social Specialist	Social Development Specialist	Yes
Aissatou Seck	Counsel	Counsel	No
Anta Tall Diallo	Procurement Team	Procurement Assistant	No
Patrick Diame Dione	Team Member	Transport Specialist	No
Ndeye Diop Diaw Gueye	Team Member	Transport Specialist	No
Lisa Warouw	Team Member	Team Assistant	No
Taha Oulhazzan	Team Member	Transport Analyst	No
Edmond Tawelessi	Team Member	Transport Analyst	No
Cassandra Augusma	Team Member	Transport Specialist/Gender Focal point	No
Abib Samb	Team Member	FM Assistant	No
Mareme Ngom	Team Member	Team Assistant	No
Modibo Traore	Team Member	Disbursement Specialist	No

I. BACKGROUND AND RATIONALE FOR ADDITIONAL FINANCING

A. Introduction

1. **This Project Paper requests the Executive Directors' approval for a proposed second Additional Financing (AF2) in an amount of US$140 million equivalent through an IDA credit for the "*Enhancing Connectivity in the Northern and Central Agricultural Production Areas of Senegal Project*" (*Projet de la Connectivité des Zones de production Agricoles dans le Nord et le Centre du Sénégal, PCZA* - P176419)**. The AF2 is designed to finance the scale up of the project's roads construction activities under Component One, as well as the small community infrastructure under Component Two. This proposal follows a formal request for financing by Senegal's Ministry of Finance and Budget (*Ministère des Finances et du Budget*) dated November 11, 2025.

2. **As part of the proposed AF2, the parent project – following its first restructuring under the first Additional Finance (AF1) in May 2023 – will undergo a second restructuring encompassing four key changes**: (i) scaling up the scopes of Components One and Two; (ii) updating the project costs; (iii) updating the Results framework (RF); and (iv) extending the closing date of AF1's IDA Scale-Up Window (SUW) Credit "IDA-73400" [1].The closing date of the project with AF2 will be December 31, 2030.

B. Transport Sector Background

3. **Senegal holds a strategic position as one of the West Africa region's main economic hubs, situated at the continent's westernmost point along the Atlantic coast, bordering Guinea, Guinea-Bissau, Mali, Mauritania, and The Gambia**. Senegal's economy draws its primary foreign exchange earnings from exports of groundnuts, fisheries, phosphates, tourism, and services, while also serving as a regional center for banking, shipping, and transportation. The country is classified as a Lower-Middle Income Country (LMIC) with a per capita Gross National Income (GNI) of US$1,680 in 2024[2]. With a population of approximately 18.6 million, 53 percent of which is urban – including roughly 22 percent in the capital city Dakar and the remainder in other major urban centers – Senegal is experiencing a fast-paced urbanization, fueled by unbalanced regional development and urban-rural disparities, resulting in lack of rural population's access to economic opportunities, basic infrastructure, and public services. [3]

4. **Transport connectivity remains a significant obstacle to cementing Senegal's standing as a regional transport hub**. Despite the country's growing prominence in West African trade and logistics, its ranking of 141 out of 167 countries on the 2018 Logistics Performance Index (LPI)[4] reflects both poor land connectivity and lack of logistics facilities and services. Despite several reforms pursued by the Government of Senegal (GoSN) in recent years to address these shortcomings, they continue to constrain the performance and growth of the country's key economic sectors. Agriculture is particularly impacted, where the poor access to farming land in the rural areas stands as a major hurdle to the achievement of the sector's main objective of food security and self-sufficiency on main staple foods.

5. **Poor road connectivity severely limits access to local and international markets, with marked disparities across the country**. Road infrastructure plays a central role in the national economy with over 90 percent[5] of all trips made by road. Senegal's Rural Access Index (RAI)[6] stands at just 35 percent, implying that on average one in three people in rural

[1]The two initial Credits IDA-70550 and IDA-70560 under the parent project, will be fully implemented by the current project closing date of December 31st, 2027. The third Credit that was introduced during AF1 IDA-73400 will be extended by one additional year from December 31st, 2027, to December 31st, 2028.
[2] World Bank GNI Atlas method.
[3] National Statistics Agency - *Annuaire Population du Sénégal*, ANSD 2024.
[4] World Bank, 2018. https://lpi.worldbank.org/international/scorecard/radar/C/SEN/2018/C+SEN+2018: this is the latest LPI report involving Senegal.
[5] UN DESA
[6] The RAI is one of the Sustainable Development Goals (SDG) indicators, and it estimates of the proportion of the rural population within two (2) kilometers of an all-weather road. SDG Indicator 9.1.1: Rural Access Index (RAI), 2023 Release | NASA Earth data

areas live within 2 km of an all-season (all-weather) road. This figure compares unfavorably with Kenya (62 percent) and Rwanda (58 percent) and is only marginally higher than Nigeria (28 percent) and Mali (26 percent) as of 2023. Regional disparities in road access are particularly prominent between the coastal areas and the rest of the country, with rural populations in the central, northern, eastern, and southern regions remaining particularly underserved and largely landlocked.[7] Agriculture, being the main source of income and employment for the rural population in those regions, consists mainly of smallholder and subsistence farming practices with low productivity levels and high vulnerability to climate change, generating low and unstable income. Among the main impediments to the development of modern, high added value Agriculture and Husbandry production and transformation value chains, are: (i) the lack of all-season road access to the farming land, constraining the supply of inputs and labor to enhance productivity; and (ii) the lack of transport and logistics services to enable timely crops collection, conditioning, transformation and commercialization.

6. **Climate change can have detrimental impacts on road network resilience and connectivity to farming, livestock herding, markets, and food value and supply chains.** Higher temperatures accelerate pavement deterioration, while heavy seasonal rains make many rural roads impassable, isolating communities and disrupting access to markets and services. More broadly, Senegal is highly vulnerable to rising temperatures, increasingly intense rainfall, prolonged droughts, and recurrent flooding. Without adaptation measures, climate change could reduce Senegal's Gross Domestic Product (GDP) by 9.4 percent by 2050 and push over two million additional Senegalese into poverty[8]. The predominantly rainfed agricultural sector, which employs two-thirds of the poor, is particularly exposed. By 2050, agriculture's value added could fall by 10 percent due to changes in rainfall, higher evaporative demand, extreme heat, wildfires, and soil erosion, with additional losses in livestock productivity from reduced forage, water and pastureland availability.

C. Project Background and Current Implementation Status

7. **The project was approved on March 16, 2022, with a financing envelope of US$200 million equivalent IDA** alongside US$2 million in GoSN counterpart funding. The project became effective on July 7, 2022.

8. **Following the tendering of civil works under Component One**, shortly after effectiveness, bid prices came substantially above the original estimates, with the increase mainly attributed to post COVID-19 pandemic global inflation. To cover the cost overrun, the World Bank approved on May 25, 2023, a first Additional Financing (AF1) in the amount of US$117 million equivalent bringing the total project IDA credits to US$317 million equivalent. In addition to covering the higher civil works costs, AF1 resources were also used to expand the activities under the institutional capacity building Component Three and to introduce a new Component Five dedicated to road safety. The latter was in response to a series of deadly road accidents in Senegal, that led the GoSN to request the World Bank support to scale up road safety activities initially included in the parent project.

9. **The Project Development Objective (PDO)** is ***to enhance resilient road connectivity in selected agricultural areas of Senegal and to support road safety institutional capacity development in Senegal***.

10. **Progress toward achieving the PDO is currently rated Satisfactory, reflecting strong momentum across all project components**. The Satisfactory rating is underpinned by the steady project implementation over the past three and half years, despite major setbacks during the 18 months period of June 2024 – December 2025 due to the GoSN fiscal austerity measures. The Satisfactory progress is reflected in key PDO indicators progressing substantially towards achieving the expected results, including: (i) the number of people living within 5 km of an all-weather road in the selected areas has reached 314 000 against a target of 350 000 (89.7 percent); (ii) travel time along key sections connecting

7 According to the Senegal - 2035 National Road Master Plan an estimated 15,000[7] km of road network needed to connect the entire national territory and unlock social and economic opportunities, approximately only 6,000 km have been built so far.
[8] World Bank. 2024. Senegal Country Climate and Development Report. https://www.worldbank.org/en/country/senegal/publication/senegal-country-climate-and-development-report

agricultural production areas to markets has been reduced by 15 percent, half way towards the 30 percent target set for the end of the project; (iii) the share of people in project target areas provided with improved access to socio-economic services (schools, health care centers, markets) has reached 55 percent, exceeding the target of 30 percent; and (iv) the number of AGEROUTE and National Agency of Road Safety (*Agence Nationale de Sécurité Routière,* ANASER) staff trained on conducting road safety audits reached 26, exceeding the 25 target.

11. **Project implementation progress (IP) is rated Moderately Satisfactory, reflecting a lower-than-expected disbursement rate but with a steady path to full implementation before the current project closing date**. As of March 31, 2026, project IP is considered Moderately Satisfactory, with an overall disbursement rate of 60.5 percent, against an expected 77.9 percent. This is a direct consequence of the disbursement freeze implemented by GoSN during the second half of Calendar Year (CY) 2024, followed by a significant reduction of annual budget allocation for CY2025 in an effort to curb the country's debt and contain the budget deficit. Therefore, the implementation of the project activities – especially those under Component One, representing 87 percent of the total project costs – has been severely impacted. Several contractors to be financed under this Component have halted work, demobilized site equipment, and laid off labor to help alleviate cash flow limitations and navigate the lack of visibility regarding future government payments. However, following the allocation of US$90 million for CY2026 alone, with a potential increase during the mid-year government budget review, works have already resumed and accelerated for all seven contracts, leading to early completion of two contracts and an expected completion of the remaining five by March 2027. The project is now set to achieve 89 percent disbursement rate by the end of CY2026, and on track for 100 percent disbursement before the current project closing date of December 2027.

12. **The status of each of the project components is described below**:

(i) **Component One. Enhancement of Safe and Resilient Transport Connectivity in the Selected Areas (US$276.3 million equivalent, of which US$274.3 million IDA credit, and US$2.0 million government funding).** Under AF1, an increase in funding allocation was granted to this Component to cover cost overruns on the eight civil works lots, of which seven were included in the parent project budget and one conditional tranche that was included in the bidding process subject to availability of funds. The eight roadworks lots combined consist of upgrading a total of 414 km of main roads (classified national roads including urban sections), to all-season, climate-resilient paved (asphalt concrete) roads and 257 Km of feeder tracks to gravel (laterite) roads. These investments are expected to: (i) have a direct impact on approximately 350,000 people, who live within 5 km distance; and (ii) provide access for 165,000 people within 2 km to an all-season paved road and for 35,000 people to seasonal feeder roads. To date (see details under Annex 1) a total of 241.5 km out of 414 km (58 percent) of main roads and 89 km out of 257 km (35 percent) of feeder roads have been built, reflecting varying progress across the eight lots as follows: (a) Lots 2A and 4B are almost complete, with 98 and 99 percent completion rates respectively; (b) Lots 1A, 3A, 4A, 1B and 3B achieved implementation rates ranging between 60 and 73 percent, with delays essentially due to the past government budgetary constraints. With the lifting of such constraints, works have resumed at full speed on the five lots since January 2026, and are progressing well for an expected completion by December 2026 for Lots 1A and 3B, and March 2027 for Lots 3A, 4A and 1B; and (c) Works on Lot 2B has been halted since the contract termination in June 2025, however the World Bank has just approved a request for direct contracting with the second ranked bidder, with the remaining works expected to resume by July 2026 and be completed by November 2027, ahead of the current project closing date.

(ii) **Component Two. Support for Access to Economic Opportunities and Small Community Infrastructure (US$10 million equivalent from IDA)**. This Component supports the provision of small community infrastructure and/or income generating activities for the rural population, in particular women and vulnerable groups, living within the project's area of influence, defined as a strip, extending 5 km on either side of the main road sections

to be built under Component One. In full consultation with local communities, the project identified 44 priority community infrastructure interventions, including multifunctional centers for women entrepreneurs, storage areas that support agriculture value chains, schools and health facilities, market stalls, wells drillings, construction of water towers and connection to villages, among others. These were bundled under four lots, where works are progressing overall satisfactorily (see details under Annex 2). Lots 1 and 2 have been fully completed (100 percent), pending final reception. Lots 3 is also progressing well, with 68 percent completed, albeit with delays that are being gradually closed with an expected full completion by October 2026. Lot 4 is facing substantial delay and underperformance with a current progress level of 46 percent. Discussions are underway between GoSN and the contractor to find a way forward, including possible contract termination if no improvements are noticed.

(iii) **Component Three. Project Management and Institutional Support to the Transport Sector (US$13.8 million equivalent IDA credit)**. Overall, activities under Component 3 are advancing well, albeit with varying levels of delay. Activities under Autonomous Road Maintenance Fund (*Fonds d'Entretien Routier Autonome,* FERA), Dakar Urban Transport Council (*Conseil Exécutif des Transports Urbains Durables,* CETUD), General Directorate of Road Transport (*Direction Générale des Transports Routiers,* DGTR), General Directorate of Road Infrastructure and Rural Connectivity (*Direction Générale des Infrastructures et du Désenclavement,* DGIRD) and National Reference Laboratory for Buildings and Public Work (LNR-BTP) have shown good progress since the project Mid-Term Review (MTR) in June 2025. However, significant delays persist in the activities pertaining to DGTR, attributed mainly to the lack of ownership by the previous DGTR management. The new Director General appointed in June 2025 has shown full commitment to the delivery of the outstanding activities under this Component. Such commitment is yet to translated into measurable actions, therefore a close monitoring with DGTR over the remaining project implementation period is being implemented.

(iv) **Component Four. Contingent Emergency Response Component (CERC)**. The CERC has not been triggered to date.

(v) **Component Five. Support to Road Safety (US$28.8 million equivalent IDA credit and US$9.8 million Private Sector Capital)**. Activities under this Component, mainly led by ANASER, have shown substantial progress over the past year following changes in Management and strengthening of the project implementing team. Crucial to the achievement of the project PDO, activities under this Component aim to catalyze improvements in road safety through a combination of capacity building of the institutions in charge – namely ANASER and DGTR – and the implementation of hard infrastructure including a pilot road safety retrofitting activity on the National Road 1 (*Route Nationale 1,* RN1) road corridor, the construction of a second vehicle inspection center for the Dakar region, and five regional driving license examination centers.

D. Rationale for the Second Additional Financing (AF2)

13. **The government elected in 2024, developed a "Vision Senegal 2050", with a long-term objective of achieving a balanced territorial development that helps closing the regional socio-economic disparities and the urban-rural divide**. The vision entails a decentralized approach around eight regional economic growth poles with the mandate to define specific investment strategies and priorities that can help unleash their respective regional potential and leverage their comparative advantages. The project was identified by the GoSN as fully aligned with this vision, as it helps open remote areas in the central, northern and western regions of the country with a predominantly rural population and with a high agricultural potential. The project has also shown a strong implementation capacity and resulted in high beneficiary population ownership, making the project a strategic enabler of the government vision's rollout.

14. **The agro-sylvo-pastoral zones of central and south-eastern parts of Senegal, especially in the region of Tambacounda, have a high agricultural potential that remains largely untapped**. According to Senegal's National

Infrastructure Development Plan, approximately 60 percent of the rural track network in the sylvo-pastoral zones remains impassable during the rainy season, exposing populations and farming land to chronic isolation. This is further exacerbated by the growing effects of climate change, worsening seasonal flooding and accelerating the deterioration of the unpaved roads.

15. **The lack of access to resilient, all season road infrastructure in those zones is hampering the development of agriculture production, transformation, and commercialization.** The lack of access to production inputs and challenges during harvesting, storage and conditioning, result in poor land productivity and devastating post- harvest losses, especially for the perishable crops. Currently the processing rate (agricultural and livestock products) is less than 15 percent, compared to 90-98 percent in developed countries and some African countries (e.g. Morocco), with high post-harvest losses of 30-40 percent, resulting in over 20 percent of the Senegalese population being food insecure, and struggling industries in strategic agribusiness sectors (particularly oil mills).

16. **Access to basic social services (health, education, and other social services).** The lack of rural population's access to basic public services such as healthcare and education facilities, as well as to markets, is significantly undermining the efforts to improve the human development levels, especially among women and vulnerable segments of the rural population. In the project areas, many health facilities, schools, and social protection delivery points located in market towns or administrative centers remain inaccessible due to the lack of all-weather roads connecting villages to those facilities. Such conditions prevent pregnant women from reaching maternity wards on time, lead to children missing school days especially during the rainy season, and social transfer beneficiaries unable to travel to collection points. This is particularly the case in the Tambacounda region which is home to the most isolated population in Senegal, and where most of the jobs are held by men, over 83 percent of which with no education and 7.1 percent with elementary school levels. Over 68 percent of the jobs in Tambacounda are in the rural areas, mainly in agriculture[9].

17. **The GoSN is requesting a second AF2 to fund the scaling up of investments under Components One and Two, to other zones in the central and southeastern parts of the Tambacounda region.**

18. **AF2 will scale up resilient road connectivity in priority agricultural production zones that remain isolated from major regional markets.** Given the high exposure of the project area to extreme heat, flooding, and drought, and the demonstrated vulnerability of rural road infrastructure to climate-related deterioration, all investments to be financed under the AF2 will be designed to climate-resilient standards from the outset, building on and reinforcing the approach established under the parent project and the first AF. The two additional road sections to be financed under Component One will incorporate climate adaptation considerations to improve overall systemic resilience of the overall road network, including enhanced drainage systems, heat-resistant pavement standards, and nature-based solutions. Community infrastructure under Component Two will be selected based primarily on the needs of the most vulnerable communities with climate vulnerability and flood hazard mapping guiding both site selection and design to ensure investments are in areas of low hazard exposure and designed to remain functional and accessible over their economic lifetime.

19. **AF2 will support the roll out of the Agri Connect initiative[10]**. AgriConnect is centered around the fact that poor access to farming land and inadequate storage, preservation, and processing infrastructure are behind post-harvest losses and the main impediments to the development of local transformation, and the scale up resilient value chains. In support of this initiative, the project will seek to create incentives for private sector investment and know-how mobilization in the project target zones to maximize the transformational impacts of AF2 investments. Support to private capital mobilization will be channeled through two pathways: (i) indirectly through reduction in transport costs for private sector investments in Agriculture production and transformation value chains; and (ii) directly via the provision through Component Two of crops storage facilities, light transformation platforms for women entrepreneurs, cattle vaccination parcs, and market

[9] *Agence Nationale de la Statistique et de la Démographie (ANSD). Situation Économique et Sociale de la Région de Tambacounda, Édition 2024 (ansd.sn)*
[10] https://www.worldbank.org/ext/en/agriconnect

infrastructure. Main value chains in Tambacounda region expected to benefit from these investments are related to crops such as cereals (Millet, Sorghum, Maize, Cowpea) and cash crops (Groundnut, Bananas, Cotton), as well as cattle breading (milk, meat and skin), that present great potential for economic transformation and growth. AF2 will also seek to reinforce synergies with existing and planned government and development partners led initiatives in the region, to better integrate local economic actors in agricultural and agribusiness value chains enabled by improved market access.

20. **AF2 will also promote the participation of local populations in employment opportunities** — particularly among youth and women — such as in road and public facilities' construction as well as other economic activities induced by the improved access.

21. **AF2 is fully aligned with Senegal's 2025-2029 National Development Strategy (NDS) under the Vision 2050.** The NDS approved in October 2024, identified under Strategic Objective 3.5 "Establishment of connectivity infrastructure" two main outcomes: (i) Strengthening and modernizing transport networks including among others: improving connectivity of production areas to markets, and increasing the density and improving the quality of the road and highway network; and (ii) Improving the competitiveness of logistics services, through among others the development of corridors with logistics platforms (dry ports, storage infrastructure, etc.). It will help derisk private sector investments in agriculture production, transformation and commercialization, needed to create wealth and employment for the vulnerable rural populations of the region.

22. **AF2 will support the implementation of Senegal 2020-2035 National Road and Highway Master Plan (NRHMP) and complement other government led road infrastructure investments**. The NRHMP was designed to address the challenges of connectivity, accessibility, and rebalancing the road infrastructure supply across the eight regional economic poles. The proposed road sections under AF2 are among the priority investments identified in the NRHMP for the period 2026-2030 to help open landlocked areas in the region of Tambacounda with high potential for investments, especially in agriculture, husbandry and mining. In addition, as shown in page 9 Map, AF2 road investments will complement investments under the Special Program for Rural Development (PSD), co-financed by GoSN and MUFG Bank under the guarantee of UKEF. The program is financing the construction of Goudiry – Dianké Makha – Bokolako – Sadatou road section (117 km) and Bembou – Khossanto – Sabodala – Kayan (107 km), while the middle road section of Bokolako – Kayan is still looking for funding.

23. **AF2 is fully consistent with the current Senegal Country Partnership Framework (CPF, FY20–FY24)-Report Number 14333,** which supports the country's ambition to attain middle-income status by 2035, particularly the two focus areas (a) boosting competitiveness and job creation through private sector-led growth, and (b) strengthening resilience and sustainability in the face of growing risks. The project remains aligned with the strategic directions in the forthcoming CPF for FY26-FY35 currently under preparation.

24. **AF2 supports other government led and development partner supported initiatives aimed at boosting economic growth and development in Tambacounda region, through investments in agricultural and livestock value chains.** The GoSN, through the Ministry of Agriculture, Food Sovereignty and Livestock (*Ministère de l'Agriculture, de la Souveraineté Alimentaire et de l'Élevage,* MASAE), has recently launched a National Integrated Livestock Development Program[11] *(Programme National de Développement Intégré de l'Élevage*) with a total budget of CFA 51 billion (US$84 million), jointly financed by the African Development Bank (AfDB), the Islamic Development Bank (IsDB), and the GoSN[12]. The program targets the creation of 3,500 agribusiness enterprises and 18,000 jobs across animal and fodder value chains by 2028, and will be implemented nationwide across all 14 regions, including in the region of Tambacounda. Beneficiaries of this program in the Tambacounda region that are in the vicinity of the AF2 road sections will benefit from improved

[11] https://afdb.africa-newsroom.com/press/senegal--un-projet-delevage-finance-par-la-banque-africaine-de-developpement-et-la-banque-islamique-de-developpement-vise-a-accroitre-la-qualite-des-produits-dorigine-animale?lang=fr
[12] https://agriculture.gouv.sn/

connectivity as agribusinesses will be better connected to markets. The initiative is expected to directly benefit 32,000 value chain actors, half of whom are women, and focuses in its first phase on sustainably increasing animal productivity, improving processing and marketing of animal products, and professionalizing livestock value chain stakeholders.

25. **The Adaptation and Valorization of Entrepreneurship in Irrigated Agriculture (AVENIR) Project initiative[13] by Mennonite Economic Development Associates (MEDA), Biodiversity, CIAT, supports smart climate farming practices, irrigation, soil management, and agribusiness development (CAD$[14]17.97 million, equivalent of US$12.88[15]).** This initiative focuses on women and youth to improve farm profitability. Beneficiaries of the AVENIR Project will directly take advantage of AF2 improved connectivity. In addition, the AF2 is aligned with the Korsa community-based initiatives supported by a nonprofit organization Albers Foundation, which promotes community farms operated by women and urban tree-planting initiative. This AF2 will open community farms supported by the Korsa initiatives[16] located in Fass and urban Tambacounda for tree planting along roads, schools and communal areas. Finally, the AF2 will complement projects such as (i) the IBRIZ Solar Irrigation Program[17] that targets approximately 2,000 farms in Tambacounda, implementing solar-powered irrigation and post-harvest solutions to increase farm productivity and market access; and (ii) the Micro-Projects and Local Agropastoral Projects which are Small-scale agricultural and agropastoral programs supported by Non-Governmental Organizations (NGO) such as ADEF and ARDM, including demonstration plots and training programs.

II. DESCRIPTION OF THE ADDITIONAL FINANCING

26. **The proposed US$140 million equivalent IDA Credit will finance the costs of scaling up project activities under Components One and Two, with a special focus on connectivity and accessibility**. The scope of AF2 was designed with strong focus on the resilience of the target rural agricultural zones in Tambacounda region, where communities are exposed to extreme climate hazards, including extreme heat, flooding, and drought, often rendering their seasonal earth roads chronically unreliable and undermine their economic integration.

27. **Component One.** The scale up activities will consist of upgrading the road infrastructure of two high priority corridors in the central and southeastern parts of Tambacounda region (detail in paragraph 33 below). The corridors' main road sections will be upgraded from existing seasonal earth roads standards to climate-resilient all season paved roads, while the feeder dirt tracks providing access to farms will be upgraded to gravel roads (laterite). The selected road sections were identified during the project preparation phase, as part of the high priority roads providing access to key agriculture production areas in the central and southeastern areas of Senegal. They are also part of Senegal NRHMP.

28. In addition to providing access to agricultural zones with high production potential, the two proposed new road sections are expected to have a direct impact on approximately 221,000 people, including approximately 56,000 in the central corridor and 165,000 in the southeastern corridor. In addition, AF2 will provide improved road access for an additional 42,000 people, including 27,000 to all-season (Asphalt) paved roads and 15,000 people to seasonal (Gravel) feeder roads.

29. All studies (incl. technical, economic, environmental and social (E&S)) for the two road sections were conducted under the parent project. Through stakeholder engagement, local actors were involved in the identification of the priority feeder roads that provide access to farms from the main road sections. All road sections were designed to climate-resilient standards, with dedicated adaptation measures including climate-informed drainage and culvert sizing, heat-resistant

[13] CGIAR, https://alliancebioversityciat.org/stories/farmers-senegal-adopt-farming-business-beat-climate-change
[14] Canadian Dollar
[15] Exchange rate of CAD$ 1.3951/1 US$
[16] Le Korsa, https://www.aflk.org/our-work/agriculture-and-environment
[17] IBRIZ, https://www.ietp.com/en/company/ibriz

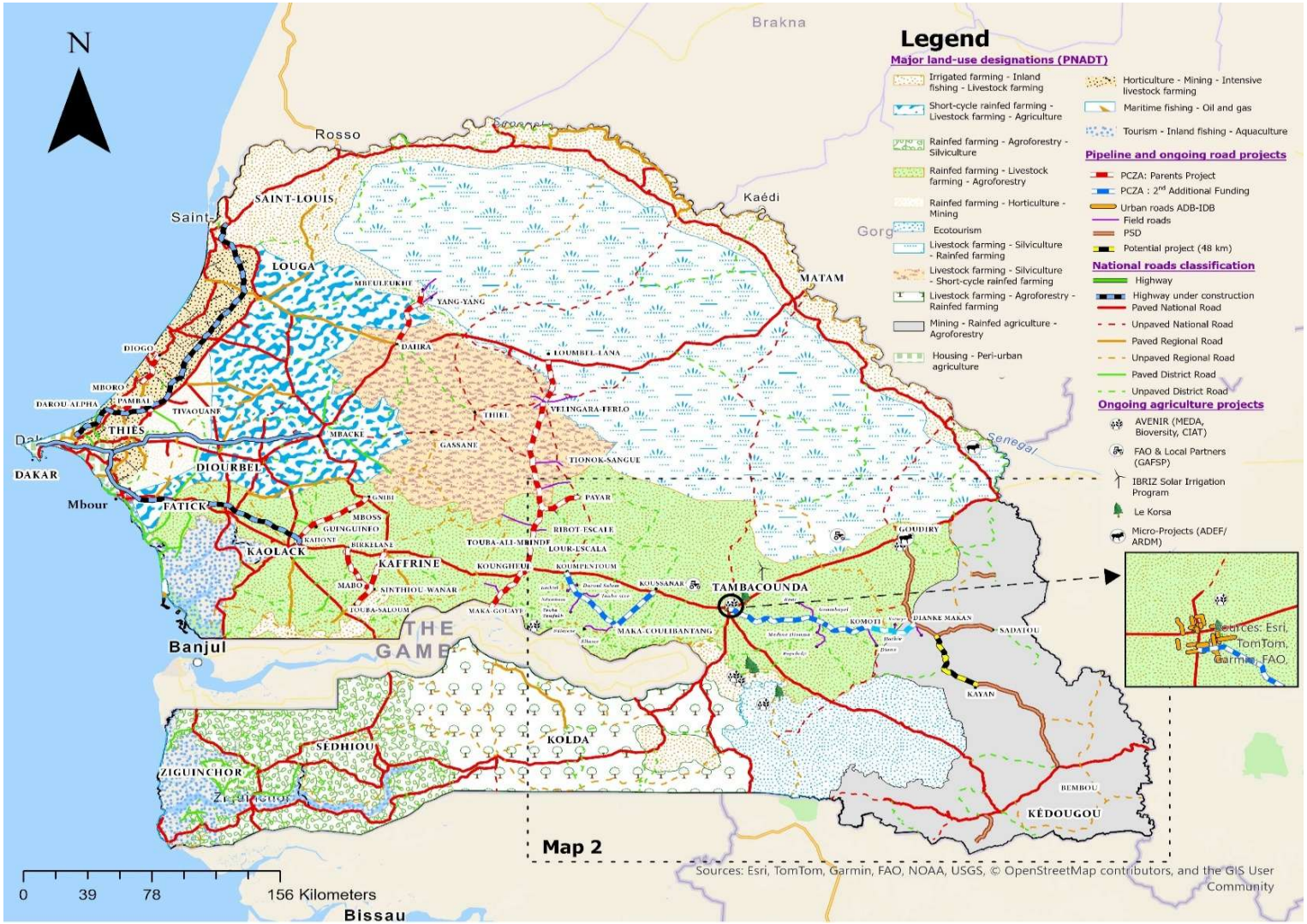
pavement specifications, and erosion protection structures, ensuring durable all-season access over the investment's design life (see details under Annex 3).

30. **Component Two** will strengthen the resilience of rural communities within 5 kms of the two upgraded road sections by financing small community infrastructure for vulnerable members, including women entrepreneurs. The scale-up activities will provide community Infrastructure similar to those built under the parent project, and which have substantially enhanced the beneficiaries' satisfaction levels and ownership of the project. Similar to Component One, beneficiary communities will be involved in the identification, design and optimal location of the economic infrastructure.

31. In the project area, where flooding and drought conditions are projected to intensify, community facilities risk becoming inaccessible or damaged during extreme weather events, undermining access to any services. To address this risk, all community infrastructure will incorporate climate-resilient design standards suited to the high-heat and flood-prone conditions of the project area, and energy efficiency measures, including renewable energy sources where applicable, ensuring facilities remain functional and accessible to vulnerable populations over their economic lifetime (see details under Annex 3).

32. **The project PDO and implementation arrangements** adopted during the first project restructuring under the first AF, will remain unchanged. The ministry overseeing the project and chairing its steering committee is now the Ministry of Infrastructure (*Ministère des Infrastructures,* MI), while the implementing unit remains the AGEROUTE and the beneficiary entities (General Directorates and institutions) are still the same even if some (DGTR, ANASER) are now under a separate ministry, the Ministry of Land and Air Transport (*Ministère du Transport Terrestres et Aérien,* MTTA).

Map 1: Road investments under both the parent Project (incl. AF1) and the AF2



A. Changes to Project Components and Activities

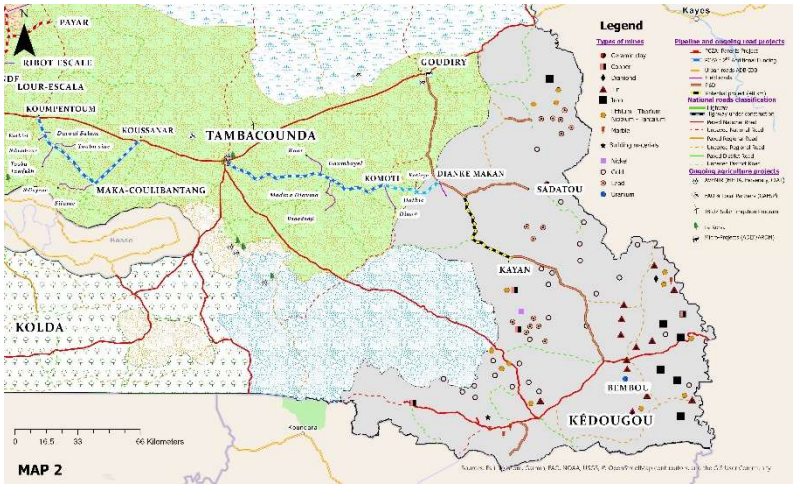
33. **The proposed AF2 will include the following changes to the parent project scope:**

(i) **Component One:** As illustrated on Map 1 and Map 2 below, this Component through AF2 will cover the costs of upgrading 171 km of main road sections from earth to Asphalt concrete standard, the construction of 8.5 km of urban roads in the towns along the corridors, and the upgrade of 104 km of feeder tracks to gravel roads, as follows:

a. Koussanar-Méréto-Maka Colibantang-Ndoumane-Koumpentoum corridor, with a main road section (80 km), urban road sections (3 km) and feeder roads (59 km); and

b. Tambacounda – Kandéri Niana – Dar Salam - Noumouyel - Goumbayel – Komoti corridor with a main road section (91 km), urban road sections (5.5 km) and feeder roads (45 km). In addition, an optional extension of this corridor to the village of Dianké Makha, including a main road section (31 km), urban road section (1.5 km) and feeder roads (15 km), will be assessed during the tendering process subject to availability of funds.

Map 2: Proposed road investments under AF2



All the above roads were designed for climate-resilient standards, incorporating enhanced drainage systems, heat-resistant pavement specifications, and nature-based solutions where applicable, to ensure all-season functionality over the project's design life. Due to the high exposure and vulnerability of the road sections to be constructed to flooding and extreme temperature in the project areas, asphalt concrete pavement standards were prioritized.

(ii) **Component Two:** This Component will finance the construction or upgrade of Small Community Infrastructure for vulnerable populations within 5 Km distance from the additional road sections, that will be financed under Component One. The Community Infrastructure will be identified in a participative approach through involvement of the beneficiaries to ensure full ownership and relevance of the investments to their daily social and business needs.

34. **Components Three, Four and Five remain unchanged**. However, the funding allocation for Component Three will be increased to account for the additional project management costs resulting from the extension of the project closing date and the scaling up of Components One and Two.

35. Table 1 presents the cost breakdown and the sources of financing for both the parent project (+ AF1) and AF2.

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TABLE 1 : INDICATIVE COSTS AND FINANCING (US$[18] MILLION)

Project Components	Parent Project + AF1)				AF2				Full Project (Parent Project + AF1 + AF2)			
	Indicative costs	IDA	Private Sector	GoS	Indicative costs	IDA	Private Sector	GoS	Indicative costs	IDA	Private Sector	GoS
1: Enhancement of safe and resilient transport connectivity in the selected areas	**276.3**	**274.3**	**0.0**	**2.0**	**133.9**	**131.9**	**0.0**	**2.0**	410.2	406.2	**0.0**	4.0
1. i: Works and supervision	274.3	274.3			131.9	131.9			406.2	406.2		
1. ii: Resettlement	2.0			2.0	2.0			2.0	4.0			4.0
2: Support for Access to Economic Opportunities and Small Community Infrastructure	**10.0**	**10.0**	**0.0**	**0.0**	**5.1**	**5.1**	**0.0**	**0.0**	15.1	15.1	**0.0**	**0.0**
3: Project Management and Institutional Support to the Transport Sector	**13.8**	**13.8**	**0.0**	**0.0**	**3.0**	**3.0**	**0.0**	**0.0**	16.8	16.8	**0.0**	**0.0**
3. i: Project management and implementation support	5.0	5.0			3.0	3.0			8.0	8.0		
3.ii: Institutional support to the Transport sector	8.8	8.8							8.8	8.8		
4: CERC	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
5: Support to Road Safety	**28.7**	**18.9**	**9.8**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**28.7**	**18.9**	**9.8**	**0.0**
5.i: Improved road safety management	3.6	3.6							3.6	3.6		
5.ii: Safer vehicles	12.8	3.0	9.8						12.8	3.0	9.8	
5.iii: Safer road infrastructure	10.0	10.0							10.0	10.0		
5.iv: Safer road users	1.4	1.4							1.4	1.4		
5.v: Safer speeds	1.0	1.0							1.0	1.0		
Total	**328.8**	**317.0**	**9.8**	**2.0**	**142.0**	**140.0**	**0.0**	**2.0**	470.8	457.0	**9.8**	4.0

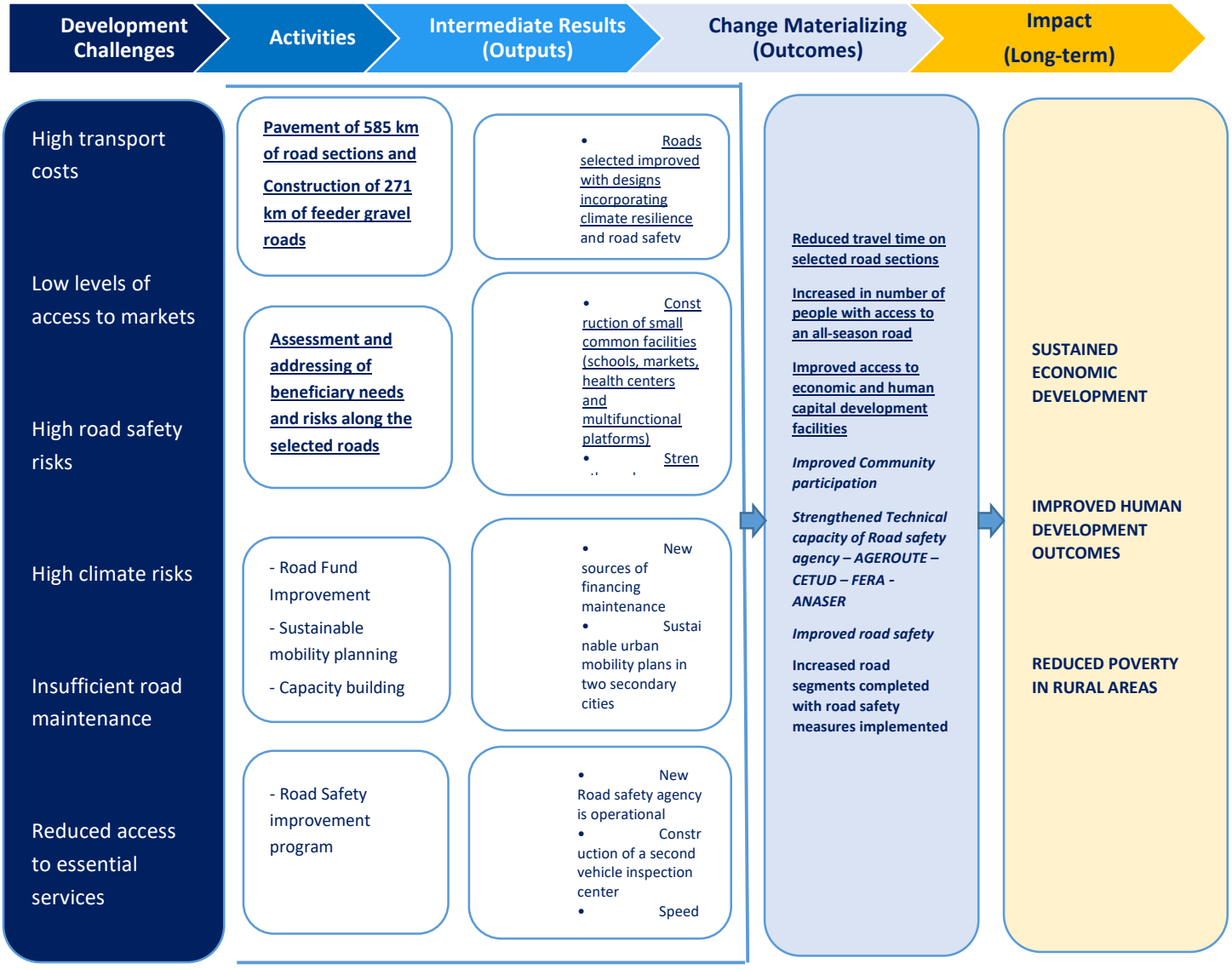
Underlined figures have changed

[18] Based on an exchange rate on April 30th, 2026, of US$1 = FCFA 559.93.

B. Changes to the Theory of Change

36. Given the scale up nature of AF2, the causality relationships under the Theory of Change remain unchanged. The Theory of change has been revised to integrate the scale up of activities under Components One and Two of the parent project, namely: (i) additional activities and outputs resulting in increase in the number of kilometers of main road sections and associated feeder roads; and (ii) additional activities and outputs resulting in an increase in community infrastructure provided. Changes are **underlined** in the diagram below.

Figure 1: Theory of Change



C. Changes in the Monitoring and Evaluation (M&E) and Results Framework

37. The M&E and Results Framework will be revised to integrate the impacts of the scale up of project activities. The following PDO and intermediate indicator description or target values and milestones will be revised:

a. PDO indicators (changes in indicators' description and/or target value, and/or milestone):

- People living within 5 km of an all-weather road in the selected areas (Number), changed to: Direct users that benefit from improved access to sustainable transport infrastructure and services (Number of people), of which women (Number) and youth (Number).
- New indicator: Beneficiary satisfaction with the road infrastructure built under the project (Percentage), of which women (Percentage) and youth (Percentage).
- New indicator: People benefiting from climate resilient infrastructure (Number), of which women (Number) and youth (Number).
- Percentage of persons in project target areas provided with improved access to socio-economic services (schools, health care centers, markets) (Percentage), changed to: People in project target areas provided with improved access to socio-economic services (schools, health care centers, markets) (Number), of which women (Number) and youth (Number).

b. Intermediate indicators (changes in indicator target value, and/or milestone):

Component One: Enhancement of safe and resilient transport connectivity in the selected areas

- Length of paved roads rehabilitated, integrating climate resilience measures (Kilometers)
- Length of feeder roads rehabilitated, integrating climate resilience measures (Kilometers)
- Community Consultations held with beneficiary feedback integrated into investment decisions (Number)

Component Two: Support for Access to Economic Opportunities and Small Community Infrastructure

- Markets built or rehabilitated (Number)
- Schools build or rehabilitated (Number)
- Health centers built or rehabilitated (Number)
- Multifunctional platforms build or rehabilitated (Number)

III. KEY RISKS

38. **The overall risk rating is Substantial.** The political and governance, macroeconomic, and E&S risks are substantial, while the remaining risks are moderate.

39. **Political and governance risk is rated Substantial**. The political landscape of Senegal is stable. The government has consistently shown strong commitment to boosting local economic development by investing in key transport infrastructure to improve rural access and opening of agricultural zones with high productivity to investment. This commitment has especially been reaffirmed during the last year at a time when the country was facing fiscal challenges. Such commitment, while applauded, remains fragile and subject to the country's overall macro-economic situation whose risk remains substantial.

40. **Macroeconomic risk is rated as Substantial**. As of March 2026, the macroeconomic risk was downgraded from high to substantial, following significant efforts the government put to improve the country's macroeconomic situation. Among the measures adopted by the government to contain fiscal deficit, disbursement freeze on all ongoing investment projects during the second half of CY2024, followed by a significantly reduced annual budget allocation in CY2025. The allocation to the project in CY2026 reflects the strategic priority of the project to the GoSN.

41. **E&S risk is rated Substantial**. As in the parent project, E&S risks and impacts are expected from the two additional road sections and associated feeder roads to be financed under Components One and Two. These activities will involve civil works and may result in risks related to: labor and working conditions, including occupational health and safety (OHS) and traffic safety, land acquisition and involuntary resettlement of Project Affected Persons (PAPs), etc. Following several worksite accidents during the past years, several safety measures have been recommended for implementation by the contractors, to significantly reduce accident risks and protect workers' lives on all worksites. With regard to potential GBV risks, awareness raising campaigns continue to be conducted on all project areas to prevent and address these risks and impacts when they materialize. The updated Environmental and Social Commitment Plan (ESCP) that applies to both the parent project and AF2 summarizes the Recipient's commitments to managing E&S risks and impacts, including institutional arrangements (maintaining key E&S positions throughout implementation), timelines for preparation of instruments, and capacity-building and training measures.

IV. APPRAISAL SUMMARY

A. Economic Analysis

42. An update of the economic analysis was carried out to account for the changes in project scope and costs introduced by AF2, building on the methodology applied in the parent project and AF1. The Highway Development and Management Tool (HDM-4) were used to evaluate the additional road sections and feeder roads to be upgraded under Component One. Road safety benefits were estimated using the Road Safety Screening and Appraisal Tool (RSSAT), and Greenhouse Gas (GHG) emissions costs were estimated with and without the project using the Shadow Price of Carbon (SPC) across low and high estimates.[19,20] The evaluation assumes 2027 as the base year for capital investment, with project roads opening to traffic in 2031, and a discount rate of 12 percent, consistent with the ex-ante analysis, over a 24-year appraisal period comprising a 4-year construction (inc. procurement) phase followed by 20 years after road opening.

43. The quantified economic benefits comprise savings in travel time, vehicle operating costs (VOC), on the basis that the International Roughness Index (IRI) will decrease significantly following upgrading to paved standard, road safety benefits through a reduction in crash rates on upgraded road sections, and GHG emissions costs. Annual traffic growth ranges between 3.5 and 5.7 percent for the Koussanar - Koumpentoum section and between 8.45 and 10 percent for the Tambacounda–Komoti Dianke Makha section, based on the project's traffic study and macroeconomic growth conditions. Induced traffic is estimated at 35 percent and 49.8 percent respectively, reflecting both the prolonged isolation and the potential for high agricultural production and transformation growth (See Table 2 in Annex)

44. **Summary of the economic analysis:** The economic analysis has been conducted considering two options of road structure combination on three lots:

[19] The GHG emissions assessment was conducted using the World Bank Group–approved methodology: *WBG GHG Accounting and Shadow Price of Carbon Guidance for Transport (January 2022).*

[20] The Shadow Price of Carbon (SPC) is the World Bank's metric for valuing the economic cost of greenhouse gas emissions in project analysis. The **low and high SPC** refer to two price scenarios reflecting uncertainty in future socioeconomic and technological trajectories, consistent with the temperature objectives of the Paris Agreement (World Bank. 2024. The Shadow Price of Carbon in Economic Analysis – 2024 Guidance Note.)

a. **Option 1:** Koussanar -Méréto-Maka-Colibantang-Ndoumane - Koumpentoum – Asphalt Concrete (83 km), Tambacounda – Goumbayel – Asphalt Concrete (64km), Goumbayel – Komoti – Dianke Makha - Double Dressing (66 km).

b. **Option 2:** Koussanar -Méréto-Maka-Colibantang-Ndoumane - Koumpentoum – Asphalt Concrete (83 km), Tambacounda – Goumbayel – Asphalt Concrete (64km), Goumbayel – Komoti – Asphalt Concrete (32.5 km).

45. **The economic analysis results demonstrate strong financial viability for both options**. The overall Economic Internal Rate of Return (EIRR) are 18.2 percent (option 1) and 18.3 percent (option 2) with Net Present Value (NPV) at a 12 percent discount rate of US$45.6 million and US$41.9 million respectively, incorporating vehicle operating cost savings, travel time savings, and road safety benefits (TABLE 4 and TABLE 5). When the cost of GHG emissions is incorporated using the Shadow Price of Carbon (SPC), the EIRR is 17.4 percent under the high SPC estimate and 17.8 percent under the low SPC estimate for option 1, and 17.3 percent under the high SPC estimate and 17.8 percent under the low SPC estimate for option 2, remaining well above the benchmark in both cases (TABLE 8 and TABLE 9). Under a combined adverse scenario of a 20 percent increase in investment costs and a 50 percent decrease in projected traffic, the EIRRs declined to 14.1 percent under Option 1 and 14.0 percent under option 2 with NPVs of US$16.6 million and US$14.6 million respectively (TABLE 6 and TABLE 7), confirming the robustness of the investment case across a range of assumptions.

46. **Non-quantifiable benefits:** Several important benefits were not quantified in economic analysis and that could further strengthen the economic viability of the investments. These include: (i) reduced road maintenance and reconstruction costs attributable to climate-resilient design standards; (ii) reduced post-harvest losses, for the region's main crops such cereals (Millet, Sorghum, Maize, Cowpea) and cash crops (Bananas, Cotton), and increased agricultural income through improved connectivity between production zones and regional markets; (iii) improved cattle breading facilities including vaccination parcs, milk collection centers, and slaughterhouses, to help enhance the standards and develop the milk, meat and skin and leather value chains; and (iv) improved access to health, education, and administrative services for rural populations within the project areas of influence.

47. **GHG Emissions: The project is estimated to result in a total Net Carbon Dioxide (CO_2) emission of 345,111 tons (option 1) and 395,089 tons (option 2) during the project's economic life, corresponding to 14,380 tons (option 1) and 16,462 tons (option 2) net annual emissions during the 24-year-long appraisal period**. The increase in CO_2 emissions is attributed to the increase in traffic demand, even though the road rehabilitation and upgrading activities will optimize vehicle speeds. No assumptions have been made regarding the technologies of vehicles traveling on the newly rehabilitated and upgraded roads. The project gross emissions are estimated at 1,248,781 (option 1) and 1,144,474 (option 2) tons of CO_2, and the baseline emissions are 903,670 (option 1) and 749,386 (option 2) tons of CO_2. The economic analysis incorporated the impact of the project on GHG emissions.

48. **Road Safety: The RSSAT assessment yields a project Safety Impact (PSI) of less than 1, indicating a net improvement in road safety outcomes over the appraisal period**, with estimated discounted benefits of US$34 million. Key safety measures to be incorporated into the engineering design include traffic calming features, improved signage and road markings, safe pedestrian crossings, junction improvements, and roadside hazard treatments. In addition, a formal road safety audit will be conducted at key stages of the project lifecycle, in line with international good practice, to identify potential safety risks and ensure that all necessary corrective measures are incorporated prior to and following road opening.

B. Technical

49. **The technical appraisal of the road investments under Component One and small community infrastructure under Component Two remains consistent with the parent project.** This AF will support a scale-up of activities, expanding the scope of Component One and Component Two without introducing significant changes to the technical design aspects.

50. AF2 Investments under **Component One** have already been fully prepared, including:

a. Full feasibility studies to optimize the road sections alignments to (i) maximize the project social and economic benefits, namely the accessibility of the populations to services and markets and the businesses to farming land; and (ii) minimize the project social and environmental negative impacts on the Fauna and Flora.

b. Detailed designs and tender documents, making them ready for tendering and implementation.

c. All road sections and feeder roads have been designed to climate-resilient standards, incorporating enhanced drainage systems, heat-resistant pavement specifications, and nature-based solutions where applicable, to ensure all-season functionality over the project's design life.

d. Road safety audits will be carried out for all road sections and feeder roads, the results of which will be incorporated in the final designs.

51. **Under Component Two**, as with the parent project and AF1, the identification and design of all community infrastructure will involve beneficiaries to ensure ownership and relevance to their needs. During the preparation phase of the parent project, some additional community needs were overlooked but were later brought to the attention of the World Bank supervision missions. These findings will be incorporated into the design of facilities to be financed under AF2.

C. Paris Alignment

52. **The project is aligned with the goals of the Paris Agreement on both mitigation and adaptation. The project is consistent with Senegal's Nationally Determined Contribution (NDC)[21] and aligns with the World Bank Country Climate and Development Report (CCDR) for Senegal (2024)** both of which identify resilient transport infrastructure as a priority for climate adaptation and sustainable development. This project supports both climate adaptation and mitigation objectives through the upgrading of road corridors and feeder roads to climate-resilient standards, employing both engineering solutions and nature-based solutions (NBS) to strengthen the climate resilience of road infrastructure. The project also incorporates enhanced drainage systems and energy-efficient and renewable energy measures in community infrastructure financed under Component Two. These measures are considered environmental and development co-benefits, and the project's net-emissive outcome is justified by the Shadow Price of Carbon (SPC) analysis, which demonstrates that the EIRR remains robust at high SPC values. The project includes a Contingent Emergency Response Component (CERC), all eligible activities included in the CERC Manual will be aligned with Paris Agreement goals. The following paragraphs summarize the Paris Alignment assessment, with additional details in Annex 3.

53. **Assessment and reduction of climate mitigation risks.** All project activities are universally aligned or present low mitigation risk. The upgrading of existing earth road sections to paved standard and the upgrading of feeder tracks to gravel (laterite) roads are considered universally aligned, with the paved upgrade covering 179.5 km and an optional extension to 213 km. Road rehabilitation and upgrading works will be undertaken within the existing single carriageway footprint, without additional lanes or road widening, and with enhancements for climate resilience, safety, and accessibility. The feeder roads financed under the project provide connectivity to rural areas without creating barriers to non-motorized transport or long-distance public transport, do not contribute to urban sprawl or deforestation, and cannot be substituted by lower-emission transport modes such as railways or inland waterways given the geographic and infrastructure context of the project area. The small community infrastructure financed under Component Two presents low mitigation risk, given its small scale, low energy intensity, and incorporation of energy efficiency and renewable energy measures. Mitigation risks across all project activities are therefore reduced to low; more details are provided in Annex 3.

[21] Republic of Senegal. 2020. *Senegal's First Nationally Determined Contributions* (French). https://unfccc.int/sites/default/files/NDC/2022-06/CDNSenegal%20approuv%C3%A9e-pdf-.pdf

54. **Assessment and reduction of climate adaptation risks.** The primary climate and disaster risks likely to affect the project investments are extreme heat, drought, and flooding. The project design includes measures to reduce risks from these climate hazards and prevent them from threatening the project's outcomes. Under Component One, the upgrading of road sections and feeder roads observes climate-resilient standards that consider current and future climate conditions, going beyond existing road design standards to factor in projected climate hazards. Climate resilience measures include enhanced drainage and culvert sizing to accommodate higher rainfall runoff during peak events, riprap, gabions, and slope protection structures for erosion control along road embankments, and the selection of asphalt concrete as the pavement standard with specifications suited to the high-temperature conditions of the project area to reduce the risk of pavement softening and premature degradation. Under Component Two, climate vulnerability and flood hazard mapping guides the siting of all community infrastructure, ensuring facilities are in areas of low hazard exposure. Additionally, building designs incorporate specific measures to address the primary hazards of flooding and extreme heat, including sloped roofs, water-resistant materials, and drainage systems to manage heavy rainfall, as well as natural ventilation and reflective roofing materials to reduce heat stress on users and building fabric. The project adequately reduces the physical climate risks to its outcomes, and the climate resilience and adaptation design considerations limit exposure to an acceptable level of residual risk.

D. Institutional Arrangements

55. **The institutional arrangements for the AF will remain as established under the parent project.** The implementation continues to be led by AGEROUTE. The interministerial Project Steering Committee established by the MI will continue to be responsible for the project strategic oversight and monitoring overall project implementation. The coordination with beneficiary agencies and responsibility for technical implementation support remains with beneficiary agencies (FERA, DGTR, CETUD, DGIRD and LNR-BTP) which will retain the responsibility for technical support and continue to be closely involved in the implementation of the project through coordination with the Project Implementation Unit (PIU).

E. Financial Management (FM)

56. **The FM arrangements for the AF will rely on the existing fiduciary arrangements in place for the parent project.** The overall FM performance of the project was Moderately Satisfactory at the last FM supervision undertaken in January 2026. The accounting system operates satisfactorily, and staffing arrangements provide a sound base for handling additional activities. However, one accountant will be hired to fill a vacant accounting position, and an internal auditor will be hired and dedicated to the project to further strengthen FM capacity under the AF. **The overall risk for the AF is rated as Substantial** mainly due to the constraints in budget allocations under the annual finance laws that may limit funding for the project. To mitigate that risk, the Beneficiary will be encouraged to sustain efforts made this year (CY2026) of proper budget allocations over the project's remaining implementation period. In addition, to adapt existing FM systems and procedures to adequately capture the activities under the AF, the PIU will (i) revise the project FM Manual to reflect the specificities of the AF2; (ii) revise the format of the quarterly interim financial report (IFR) to include the activities under the AF; (iii) migrate the parameters of the existing accounting software to include the activities under the AF2; and (iv) revise the terms of references and amend the related contract to include the audit of the AF2 within the audit's scope. **The residual FM risk is rated Moderate.**

57. **Disbursement arrangements and flow of funds:** Disbursement for the project will follow the existing disbursement arrangements for the parent project. The unaudited IFR based method for disbursement will continue to be used. The format of the reports, including the budget monitoring report, will be updated to include the AF2. The IFRs will be submitted to the World Bank within 45 days after the end of the quarter to which they relate. AGEROUTE will produce

the project's annual financial statements, which will include the AF and will comply with SYCEBNL and World Bank requirements.

58. **FundsChain.** Senegal is committed to using FundsChain, an innovative blockchain-based platform designed and provided by the World Bank Group to provide end-to-end traceability of funds flow. FundsChain supports real-time disbursement tracking, automated statements of expenditure reporting, and improved operational efficiency at no cost to the Recipient. More details about the onboarding and adoption of the FundsChain platform for this AF will be outlined in the PIM.

F. Procurement

59. **The institutional arrangements for procurement remain unchanged and will be the same as the parent project.** Procurement under the AF will continue to be carry out in accordance with the World Bank's Procurement Regulations for IPF Borrowers for Goods, Works, Non-Consulting and Consulting Services, dated July 1, 2016, and most recently revised in September 2025. As with the parent project, the AF2 will be subject to the World Bank's Anticorruption Guidelines, dated October 15, 2006, revised in January 2011. A dedicated procurement specialist was already hired under the parent project to oversee the procurement activities and will continue to carry out those under AF2. No additional staff are needed. The Recipient has updated the Project Procurement Strategy for Development (PPSD) and the Procurement Plan to include AF2 procurement activities, and both documents are approved by the World Bank . The procuring entity, the bidders, and service providers shall observe the highest standard of ethics during the procurement and execution of contracts financed under the project in accordance with paragraph 3.32 and Annex IV of the Procurement Regulations. International competitive bidding with rated criteria will be used for the new activities which are similar to the works under the parent project. The overall risk remains Moderate, and the procurement performance satisfactory.

G. Legal Operational Policies

Legal Operational Policies	Triggered?
Projects on International Waterways OP 7.50	No
Projects in Disputed Area OP 7.60	No

H. Environmental & Social

60. **As for the parent project, both the Environmental and the Social risks for AF2 are rated Substantial.** Potential E&S risks and impacts are expected from civil works under the project and relate to the working conditions; OHS; community health and safety; waste management; GBV, Sexual Exploitation and Abuse / Sexual Harassment (SEA/SH). The PIU has recruited E&S Specialists who are already on board, as well as one OHS Expert. For the purpose of AF2, the project has updated the following E&S instruments: the ESCP, and the Stakeholder Engagement Plan (SEP). The ESCP and SEP have been publicly disclosed in the country and the World Bank external website[22]. The updated ESCP supersedes previous versions of the document and shall apply both to the parent project and AF2 activities. The ESCP has already set out the E&S instruments that shall be adopted and implemented under AF2. These instruments were subject to prior consultation and disclosure, consistent with the Environmental and Social Standards (ESS), in form and substance, and in

[22] ESCP and SEP disclosed on May 7th, 2026, on the World Bank Website: https://projects.worldbank.org/en/projects-operations/document-detail/P176419?type=projects

a manner acceptable to the World Bank. Once adopted, the E&S instruments may be revised from time to time with prior written agreement by the World Bank. E&S studies related to the proposed two additional road sections under AF2 were prepared under the parent project in anticipation of a potential second AF[23].

61. The original Labor Management Procedures (LMP) of the parent project, which will be updated withing three months of AF2 effectiveness, will serve for the activities of AF2. The Environmental and Social Management Framework (ESMF) provided guidance for the E&S screening and preparation of site-specific instruments: Environmental and Social Impact Assessments (ESIAs)[24] were prepared and disclosed. Where needed, Resettlement Action Plans (RAPs)[25] were prepared, disclosed, and will be fully implemented prior to the start of any physical, as per the parent project Resettlement Policy Framework (RPF).

62. **Citizen engagement:** The involvement of the local communities is essential to the success of the project to ensure smooth collaboration between project staff and local communities, and to minimize and mitigate E&S risks related to the proposed project activities. It ensures that the government engages in continuous (on a semester basis), meaningful, and safe consultations on policies and procedures (including grievances) with all stakeholders, providing them with timely, understandable, and accessible information throughout the project lifecycle. The project has established a fully functional Grievance Redress Mechanism (GRM), implemented in accordance with the SEP and supported by municipal and departmental grievance committees. As of March 2026, a total of 489 grievances had been registered, all of which were reviewed and responded to, with no grievances pending. Of these, 441 grievances were deemed eligible, and 244 were compensated. Payment delays are mainly concentrated on Lot 3B (Diogo – Mboro – Tivaouane) and, to a lesser extent, on Lots 2A and 4B. To address these outstanding cases, an Addendum to the RAP[26] for the Diogo section has been prepared, cleared and disclosed. Compensation payments related to eligible grievances will be finalized promptly following the disclosure of the RAP Addendum, thereby allowing the project to fully resolve pending cases and strengthen the effectiveness and credibility of the resettlement process. Citizen engagement committees will continue to be consulted as implementation progresses. Furthermore, the parent project includes a citizen engagement indicator which will also be applicable to the AF, namely: “percentage of population expressing satisfaction with the quality of roads in their area”. A second indicator will be added named “community consultations held with beneficiary feedback integrated into investment decisions” to better measure the integration of communities in the choice of subprojects.

63. **Gender**: The gender-related activities will continue with no change in their nature nor in the related indicators. Some of these activities under Component Two such as water storage tanks and additional equipment for certain multifunctional platforms to better reflect local economic needs, or Gender-Based Violence (GBV) awareness raising campaigns in the communities beyond a safeguard standpoint, will be scaled up by this AF2 following requests from women. To date, very few GBV complaints have been received, and almost all have been treated and referred to social providers, except for a recent complaint which is under investigation. Under the parent project, an analysis of the barriers that women face, the role they play in the agriculture value chains and the constraints for their participation in the construction sector was conducted. Following this analysis, a Gender Action Plan (GAP) was prepared, which recommended specific actions such as (i) gender sensitive recruitment and retention processes; (ii) women’s mobilization through the creation of women groups to operate some small community infrastructures dedicated to women; (iii) identification of complementary interventions to address women’s mobility and productivity barriers including but not limited to the construction of storage/market facilities for women, provision of agribusiness skills and production inputs such as a long term provision of community land; and (iv) incorporation of design features in roads to address women’s mobility priorities. A defined target of 5 percent women working in road

[23] All E&S instruments (ESCP, SEP, ESIAs, RAPs, LMP, RPF, ESMF), were disclosed in the country, under the PIU’s website: https://ageroute.sn/projet-damelioration-de-la-connectivite-des-zones-agricoles-pcza-dans-les-zones-du-nord-et-du-centre/

[24] ESIAs were disclosed on 04/23/2026 on World Bank Website: https://projects.worldbank.org/en/projects-operations/document-detail/P176419?type=projects

[25] RAPS were disclosed on 04/21/2026 and 05/22//2026 on World Bank Website: https://projects.worldbank.org/en/projects-operations/document-detail/P176419?type=projects

[26] Addendum RAP disclosed on 05/22/2026 on World Bank Website: https://documents1.worldbank.org/curated/en/099052226062519822/pdf/P176419-38f46494-f9b5-4a1d-ba3b-52edd9452ef5.pdf

rehabilitation/construction has been adopted, to provide women with new employment opportunities. Such opportunities will enhance their employability in the sector in the long term. Women's economic empowerment and role in agricultural activities is being measured by the number of shops/mini-storage facilities and multifunctional platforms built for women entrepreneurs. Out of 55 shops/mini-storage facilities and 10 multifunctional platforms to be built, respectively 50 and 6 have been completed.

Legal Operational Policies	Triggered?
Projects on International Waterways OP 7.50	No
Projects in Disputed Area OP 7.60	No

V. WORLD BANK GRIEVANCE REDRESS

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

VI. PROPOSED CHANGES

Operation Information	Proposed Changes	Operation Information	Proposed Changes
Results	Yes	Loan Closing Date Extension	Yes
Conditions	Yes	Implementation Schedule	Yes
Disbursements Estimates	Yes	Loan Cancellations	No
Components	Yes	Reallocations	No
Development Objective	No	Financial Management	No
Summary Description (Operation Abstract)	No	Procurement	No

Legal Operational Policies	No	Institutional Arrangement	No
MFD/PCE	No		
Legal Covenants	No		
Implementation Modalities	No		
Disbursements Arrangements	No		
Additional Regional Institutions	No		
Clients	No		
Beneficiary Countries	No		

VII. DETAILED CHANGE(S)

COMPONENTS

Last Approved			Proposed	
Component Name	**Cost (USD)**	**Action**	**Component Name**	**Cost (USD)**
Enhancement of safe and resilient transport connectivity in the selected areas	276,250,000.00	Revised	Enhance resilient road connectivity in selected agricultural areas of Senegal	410,200,000.00
Support for Access to Economic Opportunities and Small Community Infrastructure	10,000,000.00	Revised	Support for Access to Economic Opportunities and Small Community Infrastructure	15,100,000.00
Project Management and Institutional Support to the Transport Sector	13,750,000.00	Revised	Project Management and Institutional Support to the Transport Sector	16,800,000.00
Contingent Emergency Response	0.00	No Change	Contingent Emergency Response	0.00
Support to Road Safety	28,800,000.00	Revised	Support to Road Safety Institutional Capacity Development	28,700,000.00
TOTAL	**328,800,000.00**			**470,800,000.00**

COSTS & FINANCING

Private Capital Facilitation

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

Is this project Private Capital Enabling (PCE)?

LOANS

Loan Closing

Loan/Credit/Trust Fund	Status	Original Closing	Revised Closing(s)	Proposed Closing	Proposed Deadline for Withdrawal Applications
IDA-70550	Effective	31-Dec-2027	31-Dec-2027	31-Dec-2027	30-Apr-2028
IDA-70560	Effective	31-Dec-2027	31-Dec-2027	31-Dec-2027	30-Apr-2028
IDA-73400	Effective	31-Dec-2027	31-Dec-2027	31-Dec-2028	30-Apr-2029
IDA-80680	Not Effective	31-Dec-2030	31-Dec-2030		

DISBURSEMENTS

Operation Dates & Projection Details

Reasons to change the full Disbursement date and/or the projection

Implementation Start Date	Operation Closing Date
16-Mar-2022	31-Dec-2027

Projected Date for Full Disbursement

05-Oct-2028

Expected Disbursements (in US $) (Absolute)

Year	Original Estimation at Preparation (Approval Package – 16 Mar 2022)	Revised Estimation	Actual
FY2022	1,400,000.00	1,120,000.00	0.00
FY2023	15,800,000.00	40,000,000.00	21,920,075.84

FY2024	14,830,000.00	77,000,000.00	87,908,995.77
FY2025	19,720,000.00	77,000,000.00	16,903,272.77
FY2026	26,410,000.00	52,906,666.65	69,565,213.49
FY2027	40,390,000.00	21,813,333.36	0.00
FY2028	40,850,000.00	42,526,666.63	0.00
FY2029	25,600,000.00	29,830,000.00	0.00

ENVIRONMENTAL & SOCIAL

Overview

Operation Location

Operation location and salient physical characteristics relevant to the ESS Assessment (geographic, environmental, social) (if known)

The additional financing will consist of scale up of the activities that will extend the investments under Components One and Two to other communities in the agro-sylvo-pastoral Areas of central and south-eastern Senegal, within the administrative regions of Tambacounda and Kaffrine, that have a high agricultural potential that remains largely untapped.

As part of Component One, the scale up will consist of enhancing the connectivity in those two areas, through the pavement of the following two major road corridors, and the upgrade of their feeder rural roads:

- Koumpentoum – Maka Colibantang – Koussanar
- Tambacounda – Kandéri Niana – Dianké Makha

The scale up under Component Two will consist of the provision of socio-economic infrastructure (such as economic platforms for women, schools and health facilities, market stalls, water boreholes and towers, etc.) for communities within a distance of five kilometers from the paved roads.

Detailed operation location(s) and salient physical characteristics relevant to the ESS Assessment (geographic, environmental, social)

Agriculture and livestock breeding are the main economical activities for communities in most of the Project's areas, including those proposed for this second Additional Finance. Livestock is generally managed by men, but also by women who often own small livestock (sheep, goats, poultry) and are at the heart of the production, processing and marketing of milk and other livestock products, which, along with daily milking, constitutes the main female livestock activity. The other socio-economic activities practiced by women are trade and market gardening/agriculture on small plots of land made available to them by local authorities (often granted to women's groups) or their husbands. The silvopastoral zone is characterized by the advance of the agricultural settlement front in the southern part of the Ferlo, which contributes to exacerbating competition for space between agricultural and pastoral activities. Insofar as these activities are carried out by different groups, the conflicts between them take on a particular tone, especially since the Law on the National Estate does not recognize livestock as a form of land development. Another important constraint concerns the accelerated destruction of forests.

The groundnut basin area is characterized by traditional agro-pastoral systems that favored integrated land management, which have been profoundly destabilized by several factors (rainfall deficit, introduction of plow cultivation, popularization of deforestation and stump removal techniques for crop plots, marketing of agricultural by-products, etc.). In the groundnut basin, agriculture occupies a large part of the population, including women, who are mainly involved in agricultural activities, the processing and marketing of agricultural products and small-scale trade. Illiteracy, poverty, gender inequalities, the low economic power of women, the practice of entrusting children (in the Daara), and limited access to land and means of production make women, girls and boys more vulnerable.
The prevalence of gender-based violence, including genital mutilation and early marriage occur in some areas of the implementing zone. The Niayes area is characterized by its vulnerability, of which several constraints have been identified in the agricultural systems of the Niayes area due to overexploitation of land and progressive soil degradation caused by soil impoverishment and depletion, salinization and groundwater pollution. Several strategies (reforestation, phosphating, protection, etc.) have been implemented to restore these natural ecosystems. Project activities include Component 1 (Enhancement of safe and resilient transport connectivity in the selected areas), and Component 2 (Support for Access to Economic Opportunities and Small Community Infrastructure).
In some of the road sections, particular attention should be given to species with particular status such as: Moringa olifeira and l'Adansonia digitata trees that cannot be cut or cleared without prior authorization from the Direction of Water and Forests (Référence Code forestier du Sénégal, loi n° 98-164 du 20 février 1998), laughing dove (spilopelia senegalensis) mentioned on the CITES's ANNEX III of species in danger of extinction, red monkeys (Erythrocebus patas) also considered a threatened species in the project area.

Borrower's Institutional Capacity

As the PP, the proposed second AF project will be implemented by the Agence de Gestion des Routes (AGEROUTE) which has capitalized on several experiences in managing environmental and social risks and impacts related to roads activities aspects of development projects financed by multiple other Technical and Financial Partners, including the World Bank Group, notably with the implementation of the Senegal Transport &Urban Mobility project (PATMUR) (P101415) and Dakar Bus Rapid Transit Pilot Project (BRT) (P156186). With this capacity, AGEROUTE will continue to be responsible for planning and implementation of project's activities, either directly or in collaboration with other stakeholders like Conseil Exécutif des Transports Urbains de Dakar (CETUD), Fonds d'Entretien Routier Autonome (FERA), Direction des Transports Routiers (DTR) and Direction des Routes (DR). AGEROUTE has a Social Development Specialist and an Environmental Specialist. Their performance in supervising the implementation of safeguards instruments has been moderately satisfactory in the context of previous transport projects. Because AGEROUTE is implementing numerous activities, including projects financed by the World Bank, four additional experts that were recruited under the PCZA Project will be dedicated to the implementation of the AF: one environmental specialist, one social development specialist, one Occupational Health and Safety (OHS) and one gender specialist. Their performance is fair. With the exception of the OHS Expert who failed to provide adquate OHS support, the E&S and GBV Experts have been provided with support from the World Bank team, especially regarding review of instruments in line with ESSs requirements, and reporting process. The recruitment of the new OHS specialist is being finalized to complement the E&S risks and impacts management team. AGEROUTE and other stakeholders involved in the project have been gaining experience in applying the ESF, so their capacity will still need to be complemented/enhanced, as well as the capacity of all other agencies that will be involved in the implementation of the project, to comply with ESF requirements. For all these reasons, the PIU will still need additional capacity building on planning and implementation activities and trainings on E&S risks management, citizen engagement and GRM , GBV/ SEA/SH, OHS.

Assessment

Environmental & Social Risk Classification

Environmental Risk Rating
Substantial

Social Risk Rating
Substantial

Original Environmental and Social Risk Rating (ESRC)
Substantial

Revised Environmental and Social Risk Rating (ESRC)
Substantial

Environmental & Social Standards

E & S Standards	Relevance
ESS 1: Assessment and Management of Environmental and Social Risks and Impacts	Relevant
ESS 10: Stakeholder Engagement and Information Disclosure	Relevant
ESS 2: Labor and Working Conditions	Relevant
ESS 3: Resource Efficiency and Pollution Prevention and Management	Relevant
ESS 4: Community Health and Safety	Relevant
ESS 5: Land Acquisition, Restrictions on Land Use and Involuntary Resettlement	Relevant
ESS 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources	Relevant
ESS 7: Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities	Not Currently Relevant
ESS 8: Cultural Heritage	Relevant
ESS 9: Financial Intermediaries	Not Currently Relevant

Summary of Assessment of Environmental and Social Risks and Impacts

The AF2 project is assessed as Substantial for both environmental and social risk. Potential adverse impacts and risks associated with road construction/rehabilitation and community infrastructure have been assessed in the site-specific E&S instruments, including two site-specific ESIAs and two site-specific RAPs, which will be disclosed prior to the commencement of works. An E&S screening process will be applied to community infrastructure to be identified during implementation, and the required site-specific instruments (ESIA/ESMP and/or RAP, as applicable) will be prepared and disclosed prior to the launch of relevant procurement processes and in any case before the start of associated civil works. The updated ESCP for AF2 summarizes the Borrower's commitments for managing E&S risks and impacts, including institutional arrangements (maintaining key E&S positions throughout implementation), timelines for preparation of instruments, and capacity-building and training measures.

Last Finalized Date
01-Jun-2026

Is a common approach being considered?
No

Conditions

Type	Description of Conditions	Action
Effectiveness	Conditions of Effectiveness Signature of the Subsidiary Agreement between the Recipient and the Project Implementing Entity (AGEROUTE) and provision of a legal opinion confirming its validity and binding effect upon the Beneficiary and the PIU (Section 5.01 of the FA).	No Change
Effectiveness	Signature of the Subsidiary Agreement between the Recipient and the Project Implementing Entity (AGEROUTE) and provision of a legal opinion confirming its validity and binding effect upon the Beneficiary and the PIU (Section 5.01 of the FA).	New

RESULTS FRAMEWORK

Project Development Objective(s)

The Project Development Objective (PDO) is to enhance resilient road connectivity in selected agricultural areas of Senegal and to support road safety institutional capacity development in Senegal.

PDO Indicators by PDO Outcomes

Baseline	Period 1	Completion Period
Revised **Enhance resilient road connectivity in selected agricultural areas of Senegal**		
New **Direct users that benefit from improved access to sustainable transport infrastructure and services** (Number of people) CRI		
Apr/2023	Dec/2027	Dec/2030
0	165,000	207,000
➢ New **Direct users that benefit from improved access to sustainable transport infrastructure and services - Female** (Number of people) CRI		
Apr/2023	Dec/2027	Dec/2030
0	82,500	103,500
➢ New **Direct users that benefit from improved access to sustainable transport infrastructure and services - Youth** (Number of people) CRI		
Apr/2023	Dec/2027	Dec/2030
0	41,250	51,750
Revise **Changes in travel times along key project road sections connecting selected agricultural production areas to markets** (Percentage)		
Apr/2023	Dec/2027	Dec/2030
100.00	70	70.00
Rationale for Change	**Target travel time of 70% on the parent project (incl. AF1) would not change and should be achieved in Dec. 2027. For the new roads to be upgraded under the AF2, with similar target of 70% will be achieved in Dec 2030.**	
New **Beneficiary satisfaction with the road infrastructure built under the project** (Percentage)		
Apr/2023	Dec/2027	Dec/2030
0	85	85
➢ New **of which Female** (Percentage)		

Apr/2023	Dec/2027	Dec/2030
0	51	51
➢ New **of which Youth** (Percentage)		
Apr/2023	Dec/2027	Dec/2030
0	25	25
Support for Access to Economic Opportunities and Small Community Infrastructure		
New **People benefiting from climate resilient infrastructure** (Number of people) CRI		
Apr/2023	Dec/2027	Dec/2030
31,499	350,000	570,000
➢ New **People benefiting from climate resilient infrastructure - Female** (Number of people) CRI		
Apr/2023	Dec/2027	Dec/2030
14,805	178,500	285,000
➢ New **People benefiting from climate resilient infrastructure - Youth** (Number of people) CRI		
Apr/2023	Dec/2027	Dec/2030
9,000	89,250	142,500
Revise **People in project target areas provided with improved access to socio-economic services (schools, health care centers, markets)** (Number)		
Apr/2023	Dec/2027	Dec/2030
0	350,000	570,000
Rationale for Change	**Target number of beneficiary people under the parent project (incl. AF1) will be achieved by Dec. 2027. The target number of additional people under AF2 will be achieved by Dec. 2030**	
➢ New **of which Youth** (Number)		
Apr/2023	Dec/2027	Dec/2030
0	89,250	142,500
➢ Revise **Of which Female** (Number)		
Apr/2023	Dec/2027	Dec/2030
0.00	178,500	285,000
Revise **Population expressing satisfaction with the socio-economic infrastructure built in their area (Disaggregated by gender)** (Percentage)		
Apr/2023	Dec/2027	Dec/2030
0.00	85.00	85.00
Rationale for Change	**End target date has been extended.**	
➢ New **of which Youth** (Percentage)		

Apr/2023	Dec/2027	Dec/2030
0	25	25
➢ Revise**Of which Female** (Percentage)		
Apr/2023	Dec/2027	Dec/2030
0.00	51	51.00
Revised**Support to Road Safety Institutional Capacity Development**		
New**Project roads completed with road safety measures implemented (Yes/No)** (Yes/No)		
Apr/2023	Dec/2027	Dec/2030
No	Yes	Yes
Revise**Changes in annual road crash fatalities along the pilot section of the RN1 road** (Percentage)		
Apr/2023	Dec/2027	Dec/2030
0.00	30	30.00
Revise**Experts trained on conducting road safety audits** (Number)		
Apr/2023	Dec/2027	Dec/2030
0.00	25	25.00

Intermediate Results Indicators by Components

Baseline	Period 1	Completion Period
Revised**Enhance resilient road connectivity in selected agricultural areas of Senegal**		
Revise**Length of paved roads rehabilitated, integrating climate resilience measures** (Kilometers)		
Apr/2023	Dec/2027	Dec/2030
0.00	414	585
Rationale for Change	**End target was increased to reflect sacle up activities and end target date was extended.**	
Revise**Length of feeder roads rehabilitated, integrating climate resilience measures** (Kilometers)		
Apr/2023	Dec/2027	Dec/2030
0.00	257	271
Rationale for Change	**End target was increased to reflect sacle up activities and end target date was extended.**	

Revise **Women employed in road rehabilitation/construction** (Percentage)		
Apr/2023	Dec/2027	Dec/2030
0.00	5	5.00
Rationale for Change	**End target was increased to reflect sacle up activities and end target date was extended.**	
Revise **Community Consultations held with beneficiary feedback integrated into investment decisions** (Number)		
Apr/2023	Dec/2027	Dec/2030
0.00	40	60
Rationale for Change	**End target was increased to reflect sacle up activities and end target date was extended.**	
Revised **Support for Access to Economic Opportunities and Small Community Infrastructure**		
Revise **Markets built or rehabilitated** (Number)		
Apr/2023	Dec/2027	Dec/2030
0.00	7	10
Rationale for Change	**The end target was increased to reflect scale up activities and end target date was extended.**	
Revise **Schools built or rehabilitated** (Number)		
Apr/2023	Dec/2027	Dec/2030
0.00	10	15
Rationale for Change	**The end target was increased to reflect scale up activities and end target date was extended.**	
Revise **Health centers built or rehabilitated** (Number)		
Apr/2023	Dec/2027	Dec/2030
0.00	4	6
Rationale for Change	**The end target was increased to reflect scale up activities and end target date was extended.**	
Revise **Multifunctional platforms built or rehabilitated** (Number)		
Apr/2023	Dec/2027	Dec/2030
0.00	7	10

Rationale for Change	**The end target was increased to reflect scale up activities and end target date was extended.**	
Revise **Shops/mini-storage facilities leased out to female entrepreneurs in improved markets** (Percentage)		
Apr/2023	Dec/2027	Dec/2030
0.00	40	55
Rationale for Change	**The end target was increased to reflect scale up activities and end target date was extended.**	
Revised **Project Management and Institutional Support to the Transport Sector**		
Revise **Sustainable mobility plans in two secondary cities** (Number)		
Apr/2023	Dec/2027	Dec/2030
0.00	2.00	2.00
Rationale for Change	**End target date has been extended.**	
Revise **Budget for Road Maintenance increased** (Percentage)		
Apr/2023	Dec/2027	Dec/2030
0.00	10.00	10.00
Rationale for Change	**End target date has been extended.**	
Revise **Staff (PIU and Ministry of Transport) trained in climate resilience** (Number)		
Apr/2023	Dec/2027	Dec/2030
0.00	50.00	50.00
Rationale for Change	**End target date has been extended.**	
Revise **Gender Action Plan available** (Yes/No)		
Apr/2023	Dec/2027	Dec/2030
No	Yes	Yes
Rationale for Change	**End target date has been extended.**	
Revise **Complaints addressed within the stipulated GRM timeframe** (Percentage)		
Apr/2023	Dec/2027	Dec/2030

0.00	100	100.00
Rationale for Change	**End target date has been extended.**	
Revise **Share of GBV complaints treated and referred to service providers** (Percentage)		
Apr/2023	Dec/2027	Dec/2030
0.00	100	100.00
Rationale for Change	**End target date has been extended.**	
Revise **Share of construction workers that have signed the code of conduct** (Percentage)		
Apr/2023	Dec/2027	Dec/2030
0.00	100	100.00
Rationale for Change	**End target date has been extended.**	
Revise **National laboratory asphalt mix composition level** (Number)		
Apr/2023	Dec/2027	Dec/2030
1.00	4.00	4.00
Rationale for Change	**End target date has been extended.**	
Revised **Support to Road Safety Institutional Capacity Development**		
Revise **New National Road Safety Agency is operational** (Yes/No)		
Apr/2023	Dec/2027	Dec/2030
No	Yes	Yes
Rationale for Change	**End target date has been extended.**	
Revise **RN1 with enhanced road safety infrastructure** (Kilometers)		
Apr/2023	Dec/2027	Dec/2030
0.00	40.00	40.00
Rationale for Change	**End target date has been extended.**	
Revise **Driving license centers built and equipped with computers and operational** (Number)		

Apr/2023	Dec/2027	Dec/2030
1.00	15.00	15.00
Rationale for Change	**End target date has been extended.**	
Revise **Vehicles inspected yearly by the new center and the three mobile units** (Number)		
Apr/2023	Dec/2027	Dec/2030
0.00	430,000.00	430,000.00
Rationale for Change	**End target date has been extended.**	
Revise **Mobile speed cameras operational** (Number)		
Apr/2023	Dec/2027	Dec/2030
0.00	50.00	50.00
Rationale for Change	**End target date has been extended.**	
Revise **National Transport strategy prepared** (Yes/No)		
Apr/2023	Dec/2027	Dec/2030
No	Yes	Yes
Rationale for Change	**End target date has been extended.**	
Revise **Road safety audit prepared** (Yes/No)		
Apr/2023	Dec/2027	Dec/2030
No	Yes	Yes
Rationale for Change	**End target date has been extended.**	

Monitoring & Evaluation Plan:

PDO Indicators by PDO Outcomes

PDO Outcome	**Enhance resilient road connectivity in selected agricultural areas and support road safety capacity**
Indicator Name	**Direct users that benefit from improved access to sustainable transport infrastructure and services (Number of people)**
Description	Number of persons living or working in areas benefiting from climate-resilient transport infrastructure and services built or rehabilitated under the project
Frequency	Annual
Data source	Progress report
Methodology for Data Collection	A 5-kilometre buffer zone along the project road sections and a list of villages within the buffer zone
Responsibility for Data Collection	Project Implementation Unit (PIU)
Indicator Name	**Of which-Females (Number of people)**
Description	Number of females living or working in areas benefiting from climate-resilient transport infrastructure and services built or rehabilitated under the project
Frequency	Annual
Data source	Progress report
Methodology for Data Collection	A 5-kilometre buffer zone along the project road sections and a list of villages within the buffer zone
Responsibility for Data Collection	Project Implementation Unit (PIU)
Indicator Name	**Of which- Youth (Number of people)**
Description	Number of youth living or working in areas benefiting from climate-resilient transport infrastructure and services built or rehabilitated under the project
Frequency	Annual
Data source	Progress report
Methodology for Data Collection	A 5-kilometre buffer zone along the project road sections and a list of villages within the buffer zone
Responsibility for Data Collection	Project Implementation Unit (PIU)
Indicator Name	**Changes in travel times along key project road sections connecting selected agricultural production areas to markets (Percentage)**
Description	Changes in average travel times for vehicles between each project road segment connecting selected agricultural production areas to markets
Frequency	At midterm and completion of the project

Data source	Survey reports
Methodology for Data Collection	Traffic surveys
Responsibility for Data Collection	Project Implementation Unit
Indicator Name	**Beneficiary satisfaction with the road infrastructure built under the project (Percentage)**
Description	Beneficiaries satisfaction in percentage will be assessment through a feedback check for road infrastructure built
Frequency	At midterm and completion of the project
Data source	Progress reports/Surveys
Methodology for Data Collection	Surveys
Responsibility for Data Collection	Project Implementation Unit (PIU)
Indicator Name	**Of which-Females (Percentage)**
Description	Females beneficiaries satisfaction in percentage will be assessment through a feedback check for road infrastructure built
Frequency	At midterm and completion of the project
Data source	Progress reports/Surveys
Methodology for Data Collection	Surveys
Responsibility for Data Collection	Project Implementation Unit (PIU)
Indicator Name	**Of which-Youth (Percentage)**
Description	Youth beneficiaries satisfaction in percentage will be assessment through a feedback check for road infrastructure built
Frequency	At midterm and completion of the project
Data source	Progress reports/Surveys
Methodology for Data Collection	Surveys
Responsibility for Data Collection	Project Implementation Unit (PIU)
PDO Outcome	**Support for Access to Economic Opportunities and Small Community Infrastructure**
Indicator Name	**People benefiting from climate resilient infrastructure (Number of people)**
Description	Number of persons living or working in areas benefitting from climate-resilient roads and community (economic and social) infrastructure built or rehabilitated under the Project
Frequency	Annual
Data source	Census and geospatial data from open data sources
Methodology for Data Collection	M&E Team in the PIU will develop methodologies to collect beneficiary data

Responsibility for Data Collection	Project Implementation Unit (PIU)
Indicator Name	**Of which-Females (Number of people)**
Description	Number of females living or working in areas benefitting from climate-resilient roads and community (economic and social) infrastructure built or rehabilitated under the Project
Frequency	Annual
Data source	Census and geospatial data from open data sources
Methodology for Data Collection	M&E Team in the PIU will develop methodologies to collect beneficiary data
Responsibility for Data Collection	Project Implementation Unit (PIU)
Indicator Name	**Of which-Youth (Number)**
Description	Number of youth living or working in areas benefitting from climate-resilient roads and community (economic and social) infrastructure built or rehabilitated under the Project
Frequency	Annual
Data source	Census and geospatial data from open data sources
Methodology for Data Collection	M&E Team in the PIU will develop methodologies to collect beneficiary data
Responsibility for Data Collection	Project Implementation Unit (PIU)
Indicator Name	**People in project target areas provided with improved access to socio-economic services (schools, health care centers, markets) (Number of people)**
Description	Number of people from the local communities benefiting from access road improvements that is able to access to social infrastructure by motorized transport within 30 minutes.
Frequency	At midterm and completion of the project
Data source	Contractor, Supervision Engineer, Survey
Methodology for Data Collection	It will use population distribution, locations of social infrastructure in the beneficiary communities, and data on the speeds on roads.
Responsibility for Data Collection	PIU
Indicator Name	**Of which-Females (Number of people)**
Description	Percentage of females with improved access to socio-economic services
Frequency	At midterm and completion of the project
Data source	Contractor, Supervision Engineer, Survey

Methodology for Data Collection	It will use population distribution, locations of social infrastructure in the beneficiary communities, and data on the speeds on roads.
Responsibility for Data Collection	PIU
Indicator Name	**Of which-Youth (Number of people)**
Description	Percentage of youth with improved access to socio-economic services
Frequency	At midterm and completion of the project
Data source	Contractor, Supervision Engineer, Survey
Methodology for Data Collection	It will use population distribution, locations of social infrastructure in the beneficiary communities, and data on the speeds on roads.
Responsibility for Data Collection	PIU
Indicator Name	**Population expressing satisfaction with the socio-economic infrastructure built in their area (Percentage)**
Description	Share of beneficiary that feel project investments in socio-economic infrastructure reflected their needs
Frequency	At midterm and at the completion of the project
Data source	Survey
Methodology for Data Collection	Surveys conducted by the project
Responsibility for Data Collection	PIU
Indicator Name	**Of which-Females (Percentage)**
Description	Share of females expressing satisfaction with the quality of socio-economic infrastructure built
Frequency	At midterm and at the completion of the project
Data source	Survey
Methodology for Data Collection	Surveys conducted by the project
Responsibility for Data Collection	PIU
Indicator Name	**Of which-Youth (Percentage)**
Description	Share of youth expressing satisfaction with the quality of socio-economic infrastructure built
Frequency	At midterm and at the completion of the project
Data source	Survey
Methodology for Data Collection	Surveys conducted by the project
Responsibility for Data Collection	PIU
PDO Outcome	**Support to Road Safety**
Indicator Name	**Project roads completed with road safety measures implemented (Yes/No)**

Description	Measure the compliance with safety measures identified during detailed studies and included to Biding documents
Frequency	Before the procurement of civil works and at the end of the project.
Data source	Detailed Designs, Road Safety Audit Reports
Methodology for Data Collection	A road safety audit will be undertaken for the detailed designs, before the procurement of civil works and a post construct road safety audit at the end of the project.
Responsibility for Data Collection	PIU
Indicator Name	**Changes in annual road crash fatalities along the pilot section of the RN1 road (Percentage)**
Description	The indicator will measure the efficiency of the RN1 pilot intervention to improve road safety.
Frequency	Midterm and at the completion of the project
Data source	Survey reports and road accident data
Methodology for Data Collection	Surveys conducted by the PIU after the implementation of the RN1 pilot
Responsibility for Data Collection	PIU and ANASER
Indicator Name	**Experts trained in conducting road safety audits (Number)**
Description	The indicator will measure the number of experts trained in road safety audits.
Frequency	Annual
Data source	Training reports
Methodology for Data Collection	Number of training certificates delivered
Responsibility for Data Collection	PIU

Monitoring & Evaluation Plan:

Intermediate Results Indicators by Components

Results Area	**Enhance resilient road connectivity in selected agricultural areas and support road safety capacity**
Indicator Name	**Length of paved roads rehabilitated, integrating climate resilience measures (Kilometers)**
Description	Length of road receiving rehabilitation which incorporates climate-resilient measures, as described in Annex 7.
Frequency	Annual
Data source	Contractor, Supervision Engineer
Methodology for Data Collection	Provisional acceptance report of the supervision engineer
Responsibility for Data Collection	PIU
Indicator Name	**Length of feeder roads rehabilitated, integrating climate resilience measures (Kilometers)**
Description	Length of feeder roads constructed which incorporates climate-resilient measures, as described in Annex 7.
Frequency	Annual
Data source	Contractor, Supervision Engineer
Methodology for Data Collection	Provisional acceptance report of the supervision engineer
Responsibility for Data Collection	PIU
Indicator Name	**Women employed in road rehabilitation/construction (Percentage)**
Description	This indicator will measure the percentage of women employed in road rehabilitation/construction from the total of the project employees in civil works.
Frequency	Annual
Data source	Supervision reports
Methodology for Data Collection	A headcount of the women employed by the project in road construction/rehabilitation
Responsibility for Data Collection	PIU
Indicator Name	**Community Consultations held with beneficiary feedback integrated into investment decisions (Number)**
Description	This measures the number of consultations engaging the beneficiaries, how the feedback is integrated and the extent to which investment decisions are transparent and participatory.
Frequency	Every six months
Data source	Community consultation minutes and social engagement periodic reports
Methodology for Data Collection	Consultations conducted by the PIU and local authorities
Responsibility for Data Collection	PIU
Results Area	**Support for Access to Economic Opportunities and Small Community Infrastructure**
Indicator Name	**Markets built or rehabilitated (Number)**

Description	Number of markets build or rehabilitated in the selected areas
Frequency	Annual
Data source	Contractor, Supervision Engineer
Methodology for Data Collection	Provisional acceptance report of the supervision engineer
Responsibility for Data Collection	PIU
Indicator Name	**Schools built or rehabilitated (Number)**
Description	Number of schools build or rehabilitated in the selected areas
Frequency	Annual
Data source	Contractor, Supervision Engineer
Methodology for Data Collection	Provisional acceptance report of the supervision engineer
Responsibility for Data Collection	PIU
Indicator Name	**Health centers built or rehabilitated (Number)**
Description	Number of health care centers built or rehabilitated in the selected areas
Frequency	Annual
Data source	Contractor, Supervision Engineer
Methodology for Data Collection	Provisional acceptance report of the supervision engineer
Responsibility for Data Collection	PIU
Indicator Name	**Multifunctional platforms built or rehabilitated (Number)**
Description	Number of multifunctional platforms built or rehabilitated in the selected areas
Frequency	Annual
Data source	Contractor, Supervision Engineer
Methodology for Data Collection	Provisional acceptance report of the supervision engineer
Responsibility for Data Collection	PIU
Indicator Name	**Shops/mini-storage facilities leased out to female entrepreneurs in improved markets (Percentage)**
Description	This indicator will measure the proportion of newly constructed shops/storage facilities that are leased to female entrepreneurs.
Frequency	Annual
Data source	Contractor, Supervision Engineer
Methodology for Data Collection	Provisional acceptance report of the supervision engineer
Responsibility for Data Collection	PIU
Results Area	**Project Management and Institutional Support to the Transport Sector**
Indicator Name	**Sustainable mobility plans in two secondary cities (Number)**
Description	Two plans in two selected cities for sustainable urban mobility are realized

Frequency	Annual
Data source	Consultants/CETUD
Methodology for Data Collection	Consultant's reports
Responsibility for Data Collection	PIU
Indicator Name	**Budget for Road Maintenance increased (Percentage)**
Description	FERA's budget increased by 10 percent over the life of the project
Frequency	Annual
Data source	FERA
Methodology for Data Collection	FERA's Annual report
Responsibility for Data Collection	PIU
Indicator Name	**Staff (PIU and Ministry of Transport) trained in climate resilience (Number)**
Description	Training on green and resilient management of road projects is given to the staff of AGEROUTE and other entities
Frequency	Annual
Data source	PIU/AGEROUTE
Methodology for Data Collection	Project Progress Reports, Training Reports
Responsibility for Data Collection	PIU
Indicator Name	**Gender Action Plan available (Yes/No)**
Description	A Gender Action Plan will be developed for the project including analysis of the barriers and facilitators that women face in the sector, and the recommendations or activities to address these barriers.
Frequency	Annual
Data source	Reports/Project implementation manual
Methodology for Data Collection	Gender Action Plan prepared by a consultant.
Responsibility for Data Collection	PIU
Indicator Name	**Complaints addressed within the stipulated GRM timeframe (Percentage)**
Description	Percentage of all grievances received through the project level GRM and addressed within the stipulated in the GRM timeframe. Currently 455 complaints were received, of which 100 have been addressed
Frequency	Annual
Data source	Local registries, monitoring / evaluation report, site report, NGO report
Methodology for Data Collection	Collect all the registries and compute the number of complaints treated on time
Responsibility for Data Collection	PIU
Indicator Name	**Share of GBV complaints treated and referred to service providers (Percentage)**
Description	Ratio number of GVB-related complaints treated and referred and total number of GBV complaints reported.
Frequency	Annual
Data source	Reports on the specialized NGOs

Methodology for Data Collection	Ratio number of GVB related complaints treated and referred and total number of GBV complaints reported
Responsibility for Data Collection	PIU
Indicator Name	**Share of construction workers that have signed the code of conduct (Percentage)**
Description	Ratio of cumulative number of construction workers that have signed the code of conduct and the total number of construction workers recruited by the contractors
Frequency	Annual
Data source	Periodic report of the supervision engineer and the specialized NGO
Methodology for Data Collection	Verification if all the workers recruited have signed the code of conduct
Responsibility for Data Collection	PIU
Indicator Name	**National laboratory asphalt mix composition level (Number)**
Description	Improvement of asphalt mix design by performing rutting, modulus and fatigue tests
Frequency	Annual
Data source	LNR-BTP
Methodology for Data Collection	LNT-BTP asphalt composition mix reports
Responsibility for Data Collection	PIU and LNR-BTP
Results Area	**Contingent Emergency Response**
Results Area	**Support to Road Safety**
Indicator Name	**New National Road safety agency is operational (Yes/No)**
Description	ANASER is operational and implements the national road safety strategy
Frequency	Annual
Data source	Anaser
Methodology for Data Collection	ANASER's annual report
Responsibility for Data Collection	PIU
Indicator Name	**RN1 with enhanced road safety infrastructure (Kilometers)**
Description	The indicator will measure the number of km of RN1 enhanced by road safety measures.
Frequency	At mid-term and end of the project
Data source	Contractor, Supervision Engineer
Methodology for Data Collection	Provisional acceptance report of the supervision engineer
Responsibility for Data Collection	PIU
Indicator Name	**Driving license centers built and equipped with computers and operational (Number)**
Description	The indicator will measure the number of driving license centers built and equipped during the project.
Frequency	At mid-term and end of the project
Data source	Contractor, Supervision Engineer

Methodology for Data Collection	Provisional acceptance report of the supervision engineer
Responsibility for Data Collection	PIU
Indicator Name	**Vehicles inspected yearly by the new center and the three mobile units (Number)**
Description	The indicator will measure the number of vehicles inspected yearly by the new inspection center and the three mobile units.
Frequency	Annual
Data source	Vehicle Inspection center's operator
Methodology for Data Collection	Vehicle Inspection center operator's annual report
Responsibility for Data Collection	PIU
Indicator Name	**Mobile speed cameras operational (Number)**
Description	The indicator will measure the number of cameras operational acquired during the project.
Frequency	Annual
Data source	Law enforcement and ANSER reports
Methodology for Data Collection	Law enforcement and ANASER reports on the use of speed cameras operational acquired during the project.
Responsibility for Data Collection	PIU
Indicator Name	**National Transport strategy prepared (Yes/No)**
Description	A national transport strategy will be prepared to better integrate transport challenges in Senegal and relations between various transport modes.
Frequency	At midterm and end of the project
Data source	DGTR reports
Methodology for Data Collection	Consultant's report approved
Responsibility for Data Collection	PIU and DGTR
Indicator Name	**Road safety audit prepared (Yes/No)**
Description	This safety audit will allow the mapping of road safety challenges across the network, combine these with the mapping of traffic crashes and define an investment plan to enhance road infrastructure safety.
Frequency	Annual
Data source	consultant
Methodology for Data Collection	Consultant's report
Responsibility for Data Collection	PIU

ANNEX 1: PCZA – COMPONENT ONE IMPLEMENTATION STATUS

Component One: Road Works under the parent Project (as of April 15, 2026)	Main Road sections (km)		Feeder Roads sections (km)	
	Total length	Completed	Total length	Completed
Lot 1A: Mbirkilane-Mabo-Sinthiou Wanar-Touba Saloum and Mbirkilane-Djamal Roads	75	38	13	9
Lot 2A: Kahone-Guinguinéo-Mboss-Gnibi road	53	53	32	32
Lot 3A: Koungueul-Sali-Maka Goui-Gambia border and Koungheul-Touba Ali Mbinde Road	45	26	25	0
Lot 4A: Touba Ali Mbinde-Lour-Ribo stopover-Payar road	54	32.5	47	0
Lot 1B: Ribo Escale-Dayane Kadioly Road	50	29	43	0
Lot 2B: Dayane Kadioly-Vélingara Ferlo-Loumbel Lana-CFN3 road	51	0	38	0
Lot 3B: Mboro-Diogo Road and development and paving of the Tivaouane-Pambal-Darou Alpha Road	43	20	12	1
Lot 4B: Dahra-Mbeuleukhe road including the Yang Yang spur	43	43	47	47
Totals	**414**	**241.5**	**257**	**89**
		58%		**35%**

ANNEX 2: COMPONENT TWO IMPLEMENTATION STATUS

Component Two: Small Community Infrastructure under the parent Project (as of April 16th, 2026)			
Infrastructure type	Planned	Completed	Progress
Classrooms	44	38	86%
Hygiene blocks	28	20	71%
Administrative blocks	2	1	50%
Canteens (market)	40	20	50%
Sales halls (market)	7	4	57%
Storage facilities	13	11	85%
Boundary Walls (ml)	16,136	9,692	60%
Vaccination parks	6	5	83%
Multifunctional platforms	7	6	86%
Dairy processing unit	1	0	0%
Health posts	8	4	50%
Maternity Wards	7	3	43%
Health centers	4	2	50%
Biomedical waste management area	19	9	47%
Accommodation for midwives / Head Nurses	18	9	50%
Visitor shelters	19	9	47%

ANNEX 3: CLIMATE MITIGATION AND ADAPTATION MEASURES

Context and Climate Risk

1. **Senegal is increasingly exposed to the impacts of climate change, and these effects are expected to worsen over time.** The country experiences recurrent droughts, flooding, and extreme temperatures, with hot days exceeding 35°C projected to reach 125 days per year by 2040–2059. Climate projections indicate that average temperatures could rise by up to 4.47°C above the 1995–2014 baseline by 2040–2059 under a high-emission scenario, with chronic moderate drought conditions, reflected in a projected SPEI of −1.0, becoming a new baseline. River flood risk is already rated High in the project area, with modest additional intensification projected over the project's design life.

2. **These hazards pose a direct threat to transport infrastructure and to the agricultural communities the project serves.** Elevated temperatures accelerate pavement degradation, heavy seasonal rainfall renders rural roads impassable during the critical harvest season, and prolonged dry periods drive shrink-swell cycles in clay subgrade soils, leading to road cracking and potholing. These risks are compounded in the project area by the near-exclusive dependence of rural communities on rainfed agriculture and limited availability of alternative transport routes. Without adaptation, climate change is projected to reduce Senegal's GDP by 9.4 percent and agriculture's value-added by 10 percent by 2050.

3. **A screening of the proposed project for short- and long-term climate change and disaster risks was undertaken using the World Bank Climate and Disaster Risk Screening Tool**, drawing on data from the World Bank Climate Change Knowledge Portal (CCKP) and ThinkHazard. The primary climate and disaster risks to which the targeted road investments and community infrastructure are exposed are extreme temperatures, drought, and flooding. The project is designed with climate change adaptation and resilience as a core objective, with engineering design informed by the risk screening and complemented by more detailed hydrology and vulnerability assessments conducted during the design phase of the parent Project.

Integrating Climate Adaptation and Mitigation in the Project Design

Component One: Enhancement of Safe and Resilient Transport Connectivity in Selected Areas (US$133.9 million)

4. **Adaptation:** This component finances the upgrading of existing earth road sections to bituminous concrete standard and feeder dirt tracks to gravel (laterite) roads. The works cover 179.5 km and 104 km respectively, with optional extensions to 213 km and 119 km. These sections were identified and prioritized based on their high agricultural potential and their exposure and vulnerability to climate hazards. Approximately **20 percent** of the investment targets dedicated climate resilience measures only, including: (a) Enhanced drainage infrastructure: resizing and upgrading culverts, reinforced concrete gutters, side drains, and cross-drainage structures to accommodate higher rainfall runoff intensity projected under future climate conditions, reducing the risk of flash flooding and embankment erosion; (b) Erosion protection: riprap, gabions, and slope protection structures for stabilization and erosion control along road embankments and drainage structures; and (c) Nature-based solutions: complementing the engineered measures above through the planting of drought-resistant vegetation and trees along road corridors to provide shade and cooling, reduce surface erosion, and minimize sedimentation of drainage structures, as well as the creation of water retention structures to manage surface runoff and support water availability for surrounding communities during dry periods. The remaining **80 percent** of costs contributes to the overall systemic resilience of the road network through additional resilience measures including: (i) upgrading road sections from earth to bituminous concrete standard, using pavement specifications suited to the high-temperature conditions of the project area to reduce the risk of pavement softening, rutting, and premature degradation; (ii) earthworks and embankment fill to ensure adequate road elevation in flood-prone sections; and (iii) geometric improvements and alignment corrections to enhance all-season functionality and drainage. E&S management measures during construction, including site restoration and protection of natural resources along road corridors, will be

implemented in accordance with the project ESMP. Flood early warning systems will be further considered during the detailed engineering design phase.

5. **Mitigation:** The upgrading of road sections and feeder roads will be undertaken without capacity expansion for private motor vehicles. Improved road conditions and reduced vehicle operating costs are expected to optimize fuel efficiency for existing traffic. The project will also finance facilities for NMT, including pedestrian crossings, pathways, and sidewalks with energy-efficient, solar-powered streetlighting. The planting of trees and vegetation will also enable carbon capture and sequestration.

Component Two: Support for Access to Economic Opportunities and Small Community Infrastructure (US$5.1 million)

6. **Adaptation:** This component finances small community infrastructure, including schools, health centers, markets, and multifunctional platforms, for vulnerable populations within 5 km of the upgraded road sections. Climate risk is addressed through two mutually reinforcing approaches. First, the siting of all community infrastructure will be guided by climate vulnerability and flood hazard mapping, ensuring that facilities are in areas of low-hazard exposure within the 5 km corridor of upgraded roads, in line with a built-back-better approach. Second, all infrastructure financed under this component will incorporate climate-resilient engineering design standards suited to the primary hazards of flooding and extreme heat in the project area. For flooding and heavy rainfall, measures include sloped roofs, water-resistant materials, and drainage systems to manage surface runoff. For extreme heat, measures include natural ventilation design and reflective roofing materials to reduce heat stress on users and building fabric.

7. **Mitigation:** The community infrastructure financed under this component is small scale, low energy intensity, and incorporates energy efficiency and renewable energy measures. All community infrastructure financed under this component will incorporate energy efficiency measures and renewable energy sources where applicable, such as solar panels and solar-powered lighting to be confirmed during design, reducing GHG emissions during facility operations.

ANNEX 4: ECONOMIC AND FINANCIAL ANALYSIS

A. Introduction

1. This annex presents the updated economic and financial analysis for the AF2 of the project. The analysis covers two main components:

- One: Enhancement of Safe and Resilient Transport Connectivity in Selected Areas
- Component Two: Support for Access to Economic Opportunities and Small Community Infrastructure

2. The evaluation builds on the methodology used in the parent project and the first Additional Finance (AF1), incorporating revised cost estimates, updated traffic data, and the scope of new activities introduced under AF2.

B. Methodology and Key Assumptions

3. **For Component One (Enhancement of Safe and Resilient Transport Connectivity in the Selected Areas)**: The Highway Development and Management Model (HDM-4, Version 2) was used to evaluate the economic benefits associated with the proposed road investments. The HDM analysis focused on estimating reductions in vehicle operating costs and savings in travel time resulting from the interventions. These benefits were assessed against estimated capital investment and routine and periodic maintenance costs

4. Key assumptions are summarized below:

TABLE 2 : KEY ECONOMIC ASSUMPTIONS

Parameter	Value
Discount Rate	12%
Evaluation Period	24 years (including 4 years of construction period
Base Year	2024 (adjusted to 2027)
Construction Start	2026
Opening to Traffic	2031
Financial to Economic Conversion Factor	0.80
Residual Value (end of period)	45% of initial investment
Value of Time (passenger)	861 FCFA/hour (US$1.54/hour)
Fuel Price — Petrol	810 FCFA/liter (US$1.45/hour)
Fuel Price — Diesel	610 FCFA/liter (US$1.09/hour)

Traffic growth rates vary by corridor:

- Koussanar–Koumpentoum: 3.5 percent to 5.7 percent
- Tambacounda–Dianké Makha: 8.45 percent to 10 percent

5. In addition to the HDM-4 economic evaluation, the World Bank team conducted several complementary analyses to capture a broader range of project impacts. These included (i) an assessment of road user benefits; (ii) an evaluation

of agricultural benefits, reflecting improved market access, reduced transport costs for agricultural produce, and enhanced connectivity for rural communities along the corridors; and (iii) an assessment of GHG emissions, examining changes in emissions associated with improved road conditions, smoother traffic flows, and projected traffic growth. In parallel, a road safety analysis was undertaken using RSSAT to estimate expected safety benefits, drawing on corridor-level accident risk considerations and the integration of road safety design features. Finally, an accessibility study was conducted to assess improvements in accessibility rates resulting from the operation on both road sections. Together, these analyses provide a comprehensive assessment of the economic, environmental, and safety impacts of Component One.

6. Two technical options were compared for road surfacing across a total network of approximately 180–213 km:
   - **Option 1 (213.0 km):** Koussanar -Méréto-Maka-Colibantang-Ndoumane - Koumpentoum – Asphalt Concrete (83 km), Tambacounda – Goumbayel – Asphalt Concrete (64km), Goumbayel – Komoti – Dianke Makha - Double Dressing (66 km).
   - **Option 2 (179.5 km):** Koussanar -Méréto-Maka-Colibantang-Ndoumane - Koumpentoum – Asphalt Concrete (83 km), Tambacounda – Goumbayel – Asphalt Concrete (64km), Goumbayel – Komoti – Asphalt Concrete (32.5 km).

Economic Benefits

Vehicle Operating Cost (VOC) and Value of Time (VOT)

7. The primary economic benefits arise from reductions in vehicle operating costs and travel time for users along the improved corridors. These are captured through HDM-4 modeling under both technical options over the 24-year evaluation horizon including 4 years of construction period.

User Benefits Estimates

8. The magnitude of the combined user benefit is estimated using the 'rule of one half' in which

$$\text{User Benefit (UB)} = 0.5\,(T_1+T_2)\,(C_2 - C_1)$$

Where:

- T refers to the number of trips
- C refers to the perceived cost of each trip (including fares, gasoline and diesel prices, and travel times of vehicle occupants)
- 1 refers to the with-project scenario and 2 refers to the without project scenario

Agricultural and Market Access Benefits (exogenous benefits)

9. Exogenous agricultural benefits are estimated at 50 percent of total transport user benefits, reflecting improved market access and reduced post-harvest losses resulting from more reliable, all-season road access.

Road Safety

10. The proposed improvements to the two road sections are expected to lead to reductions in road traffic fatalities and injuries. The expected safety benefits were estimated using the World Bank's RSSAT, which assesses crash risk and quantifies the potential reduction in fatalities and serious injuries associated with road upgrading interventions.

The project is projected to reduce road fatalities and serious injuries significantly by:

- 9 fewer fatalities per year
- 85 fewer serious injuries per year

11. The overall road safety discounted benefits are estimated at US$34 million based on Estimate of the Value of a Statistical Life (VSL) for Senegal.

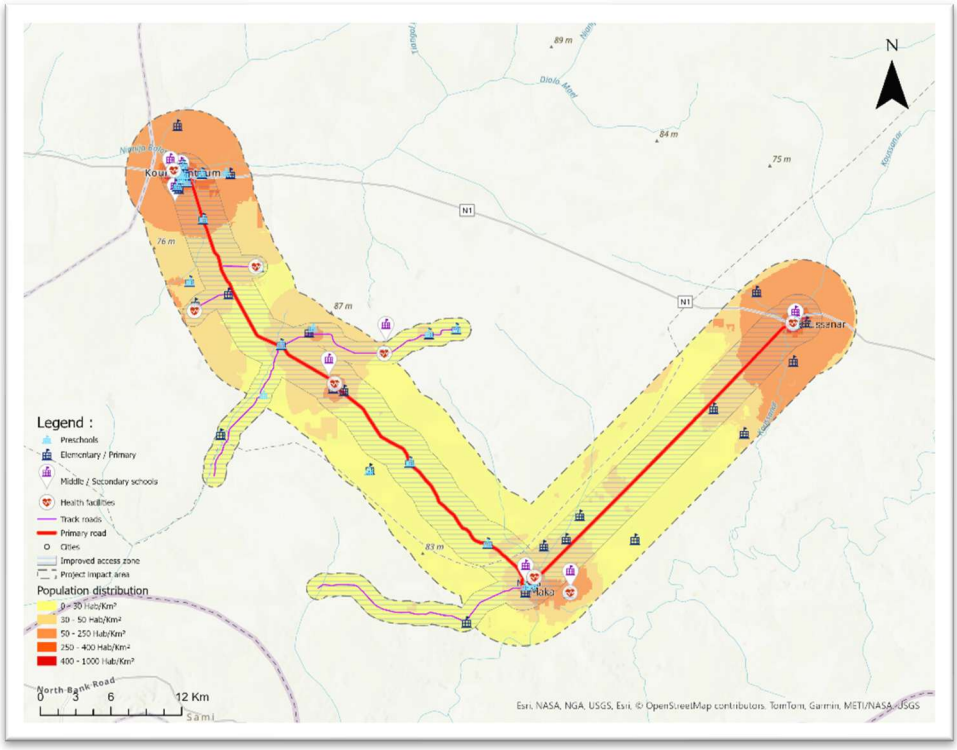
TABLE 3 : ROAD SAFETY RESULTS

Variable	Value
Senegal length of principal roads (kms)	16,665
Fatalities per km for road network	0.26
Length of total project under AF 2 *(Considering Option 1) (kms)*	213
Estimated annual fatalities on this length of road *(without project*	56
Estimated annual serious injuries on this length of road *(without project)*	554
Estimated annual fatalities with project (reductions)	47 (-9)
Estimated annual injuries on this length of road with this project (reduction)	468 (-85)

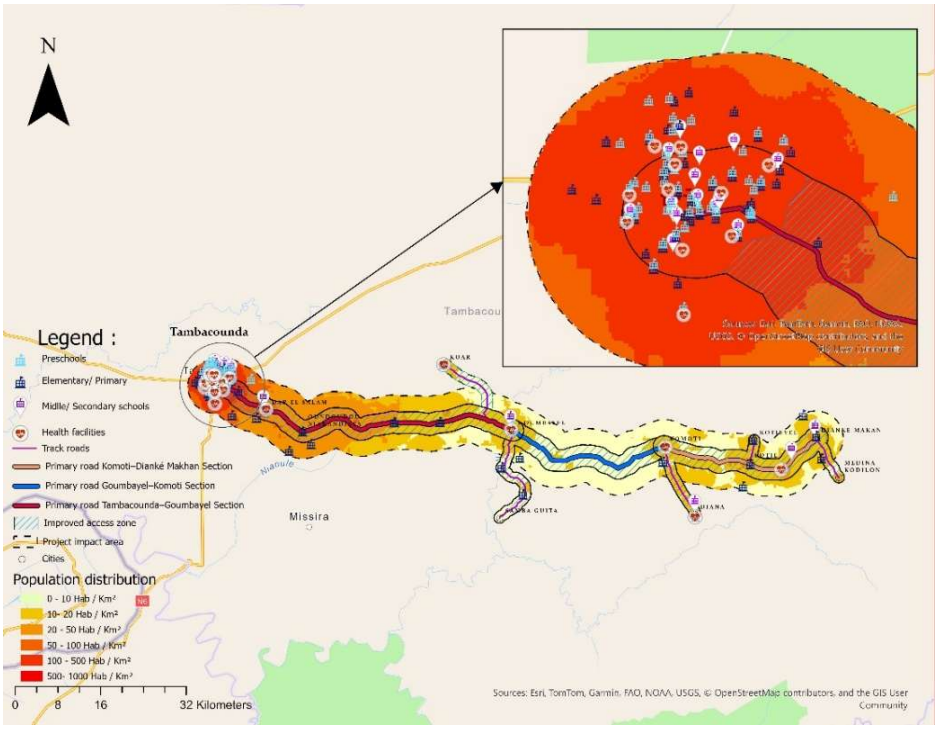
Accessibility

12. The project will improve all-season road access for 27,406 people, raising the overall accessibility rate from 11 percent to 23 percent. This includes connectivity to 9 additional health facilities and 66 additional schools, with significant implications for human capital outcomes in underserved communities.

MAP 3: IMPACT OF KOUSSANAR - KOUMPENTOUM ROAD SECTION ON RURAL POPULATION'S ACCESS TO SCHOOLS & HEALTH FACILITIES



MAP 4: IMPACT OF TAMBACOUNDA – DIANKE MAKAM ROAD SECTION ON RURAL POPULATION'S ACCESS TO SCHOOLS & HEALTH FACILITIES



Component Two — Economic Opportunities

13. To improve the living conditions of populations living along the upgraded roads, the project will establish small-scale agri-food processing centers, referred to as APTPs (Agricultural Products Transformation Platforms), with a particular focus on supporting women. Component Two will finance small community infrastructure and income generating activities for the rural population living in the project's area of influence, especially women and other groups in a situation of vulnerability. It will also build or rehabilitate basic social infrastructure such as schools, health care centers and markets

C. Economic Results

14. The AF2 demonstrates strong economic viability under both technical options. Both options present EIRR above 18 percent comfortably above 12 percent discount rate threshold, confirming the economic soundness of the proposed investments.

TABLE 4 : : ECONOMIC ANALYSIS RESULTS WITH OPTION 1

Designation	Road Structure	Length (km)	Economic Investment (US$ million)	EIRR (%)	NPV (US$ million)
Koussanar-Méréto-Maka Colibantang-Ndoumane - Koumpentoum	(Asphalt Concrete)	83.0	71.4	18.4%	23.8
Tambacounda – Goumbayel	(Asphalt Concrete)	64.0	42.1	20.5%	16.8
Goumbayel - Komoti - Diankhé Makam	(Double Dressing)	66.0	39.4	15.0%	4.9

TOTAL	**213.0**	**152.9**	**18.2%**	**45.6**

TABLE 5 : ECONOMIC ANALYSIS RESULTS WITH OPTION 2

Designation	Road Structure	Length (km)	Economic Investment (US$ million)	EIRR (%)	NPV (US$ million)
Koussanar-Méréto-Maka Colibantang- Koumpentoum-	(Asphalt Concrete)	83.0	71.4	18.4%	23.8
Tambacounda – Goumbayel	(Asphalt Concrete)	64.0	42.1	20.5%	*16.8*
Goumbayel - Komoti	(Asphalt Concrete)	32.5	21.8	13.4%	*1.2*
TOTAL		**179.5**	**135.3**	**18.3%**	**41.9**

D. Sensitivity Analysis

15. The sensitivity analysis shows that the project remains economically resilient under a wide range of adverse conditions. The Koussanar–Méréto–Maka Colibantang–Ndoumane-Koumpentoum corridor consistently demonstrates strong robustness, maintaining high EIRRs and positive NPVs even under severe traffic and cost shocks. The Tambacounda–Diankhé Makam corridor is more sensitive to downside assumptions but remains economically viable in all tested scenarios, with EIRRs staying at or above the acceptable threshold. At the aggregate level, the AF2 operation continues to generate positive net economic benefits, with total EIRRs over 14 percent remaining comfortably above the minimum benchmark even under the combined worst-case scenario. These results confirm the project's capacity to withstand significant traffic and cost risks while ensuring its financial sustainability.

TABLE 6 : ECONOMIC SENTIVITY ANALYSIS (OPTION 1)

Options 1:				Base scenario		Scenario with Invest. +20%		Scenario with -50% projected traffic		Scenario with +20% Invest. & -50% projected traffic (%)	
Designation	**Road Structure**	**Length (km)**	**Economic Investment (US$ million)**	**EIRR (%)**	**NPV (US$ million)**	**EIRR (%)**	**NPV (US$ million)**	**EIRR (%)**	**NPV (US$ million)**	**EIRR (%)**	**NPV (US$ million)**
Koussanar - Méréto-Maka Colibantang-Koumpentoum	(Asphalt Concrete)	83.0	71.4	18.4%	23.8	15.9%	16.8	16.7%	16.6	14.3%	9.3
Tambacounda – Goumbayel	(Asphalt Concrete)	64.0	42.1	20.5%	16.8	17.5%	12.8	18.9%	13.0	16.0%	8.6
Goumbayel - Komoti - Diankhé Makan	(Double Dressing)	66.0	39.4	15.0%	4.9	12.5%	1.0	13.7%	2.7	11.3%	-1.3
TOTAL		**213.0**	**152.9**	**18.2%**	**45.6**	**15.6%**	**30.6**	**16.6%**	**32.3**	**14.1%**	**16.6**

TABLE 7 : ECONOMIC SENTIVITY ANALYSIS (OPTION 2)

Options 2:				Base scenario		Scenario with Invest. +20%		Scenario with -50% projected traffic		Scenario with +20% Invest. & -50% projected traffic (%)	
Designation	**Road Structure**	**Length (km)**	**Economic Investment (US$ million)**	**EIRR (%)**	**NPV (US$ million)**	**EIRR (%)**	**NPV (US$ million)**	**EIRR (%)**	**NPV (US$ million)**	**EIRR (%)**	**NPV (US$ million)**
Koussanar - Méréto-Maka Colibantang-Koumpentoum	(Asphalt Concrete)	83.0	71.4	18.4%	23.8	15.9%	16.8	16.7%	16.6	14.3%	9.3
Tambacounda – Goumbayel	(Asphalt Concrete)	64.0	42.1	20.5%	*16.8*	17.5%	*12.8*	*18.9%*	*13.0*	*16.0%*	*8.6*
Goumbayel - Komoti	(Asphalt Concrete)	32.5	21.8	13.4%	*1.2*	11.0%	*-1.0*	*10.7%*	*-1.1*	*8.6%*	*-3.3*
TOTAL		**179.5**	**135.3**	**18.3%**	**41.9**	**15.7%**	**28.6**	**16.5%**	**28.5**	**14.0%**	***14.6***

E. Greenhouse Gas Emissions and Shadow Price of Carbon

16. As part of the HDM-4 analysis, the project team derived GHG emissions directly from the model, based on the same traffic, fuel consumption and emission parameters used to estimate vehicle operating costs and speeds. HDM-4 was run with and without the project to generate gross, baseline, and net project emissions over the appraisal period, reflecting improved road conditions, smoother traffic flows, and projected traffic growth. The resulting net GHG emissions were then monetized using the World Bank's SPC, applying low and high estimates, and this cost stream was integrated into the economic analysis to explicitly account for the environmental costs of the investment.

TABLE 8 : ECONOMIC ANALYSIS RESULTS INCLUDING SPC (OPTION 1)

Designation	**Length (km)**	**Investment (US$ million)**	**EIRR with High SPC (%)**	**NPV with High SPC (US$ million)**	**EIRR with Low SPC (%)**	**NPV with Low SPC (US$ million)**
Koussanar-Méréto-Maka Colibantang- Ndoumane Koumpentoum	83	71.4	15.8%	11.9	17.2%	17.9
Tambacounda – Goumbayel	64	42.1	21.1%	18.9	20.8%	17.9
Goumbayel - Komoti - Diankhé Makam	66	39.4	15.9%	6.9	15.5%	5.9
TOTAL	**213**	**152.9**	**17.4%**	**37.7**	**17.8%**	**41.6**

TABLE 9 : ECONOMIC ANALYSIS RESULTS INCLUDING SPC (OPTION 2)

Designation	Length (km)	Investment (US$ million)	EIRR with High SPC (%)	NPV with High SPC (US$ million)	EIRR with Low SPC (%)	NPV with Low SPC (US$ million)
Koussanar-Méréto-Maka Colibantang- Ndoumane Koumpentoum	83	71.4	15.8%	11.9	17.2%	17.9
Tambacounda – Goumbayel	64	42.1	21.1%	18.9	20.8%	17.9
Goumbayel - Komoti	32.5	21.8	14.2%	2.0	13.8%	1.6
TOTAL	**179.5**	**135.3**	**17.3%**	**32.8**	**17.8%**	**37.3**

F. Overall Project Economic Performance

17. Aggregating results across the parent project, AF1, and AF2, the project's overall economic performance remains highly favorable. The declining EIRR from earlier phases to AF2 reflects the maturation of the investment portfolio and the inclusion of more remote, lower-traffic corridors under AF2 — a pattern consistent with progressive scale-up in transport projects. The combined EIRR of 26.4 percent remains well above the minimum threshold and confirms the project's continued socioeconomic viability.

TABLE 10 : OVERALL PROJECT ECONOMIC RESULTS

Project Phase	EIRR
Parent Project	27.3%
1st Additional Finance (AF1)	34.4%
2nd Additional Finance (AF2)	18.4%
Overall Project (Combined)	26.4%