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Report No: PAD4884

INTERNATIONAL DEVELOPMENT ASSOCIATION

PROJECT APPRAISAL DOCUMENT
ON A
PROPOSED CREDIT

IN THE AMOUNT OF EURO 276.9 MILLION
(US$300 MILLION EQUIVALENT)
FROM THE SCALE-UP WINDOW

TO THE

REPUBLIC OF CÔTE D'IVOIRE

FOR A

CÔTE D'IVOIRE INCLUSIVE CONNECTIVITY AND RURAL INFRASTRUCTURE PROJECT

March 7, 2023

Transport Global Practice
Western and Central Africa Region

CURRENCY EQUIVALENTS

(Exchange Rate Effective January 31, 2023)

Currency Unit =	Euro CFA Franc (CFAF)
CFAF 605 =	US$1
US$1 =	EURO 0.923

FISCAL YEAR
January 1 - December 31

Regional Vice President:	Ousmane Diagana
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Task Team Leaders:	Alphonse Soh, Hongye Fan

ABBREVIATIONS AND ACRONYMS	
AFD	French Development Agency (*Agence Française de Développement*)
AGEROUTE	Road Management Agency (*Agence de Gestion des Routes*)
AM	Accountability Mechanism
ANSUT	National Agency for Universal Service of Telecommunications/ICT (*Agence Nationale du Service Universel des Télécommunications/TIC*)
ARDCI	Assembly of Regional Councils and Districts of Côte d'Ivoire (*Assemblée des Regions et Districts de Côte d'Ivoire*)
ASA	Advisory Services and Analytics
AWPB	Annual Work Plan and Budget
BCEAO	Central Bank of West African States (*Banque Centrale des Etats de l'Afrique de l'Ouest*)
CBA	Cost-Benefit Analysis
CC-PRICI	Coordination Unit for Infrastructure Projects in Côte d'Ivoire (*Cellule de Coordination des Projets d'Infrastructures en Côte d'Ivoire*)
CERC	Contingent Emergency Response Component
COGES	Management Committee (*Comité de Gestion*)
CPF	Country Partnership Framework
DFIL	Disbursement and Financial Information Letter
DST	Works Security Detachment (*Détachement de Sécurité des Travaux*)
EIRR	Economic Internal Rates of Return
ERS	Security Risks Evaluation (*Evaluation des Risques Sécuritaires*)
ESCP	Environmental and Social Commitment Plan
ESMF	Environmental and Social Management Framework
ESRS	Environmental and Social Review Summary
FCV	Fragility, Conflict and Violence
FER	Road Maintenance Fund (*Fonds d'Entretien des Routier*)
FM	Financial Management
FMU	Forest Management Unit
FY	Financial Year
G2PMEBTP-CI	Côte d'Ivoire Public Works Small and Medium Size Enterprises Inter-Employers' Group (*Groupement Patronal des Petites et Moyennes Entreprises du Bâtiment et des Travaux Publics en Côte d'Ivoire*)
GAA	Greater Abidjan Area
GCRF	Global Crisis Response Framework
GDP	Gross Domestic Product
GEMS	Geo-Enabling initiative for Monitoring and Supervision
GHG	Greenhouse Gas
GI-BTP	Côte d'Ivoire Public Works Inter-Employers' Group (*Groupement Ivoirien du Bâtiment et Travaux Publics*)
GII	Gender Inequality Index
GIIP	Good International Industry Practice
GoCI	Government of Côte d'Ivoire
GRM	Grievance Redress Mechanism
GRS	Grievance Redress Service
GRSF	Global Road Safety Facility
HDM	Highway Development and Management
IBRD	International Bank for Reconstruction and Development
ICT	Information and Communication Technology

IDA	International Development Association
IFC	International Finance Corporation
IFR	Interim Financial Report
ILO	International Labour Organization
IMT	Intermediate Means of Transport
INP-HB	Houphouet-Boigny National Advanced Institute of Engineering (*Institut National Polytechnique Houphouet-Boigny*)
IPF	Investment Project Financing
iRAP	International Road Assessment Program
IRR	Internal Rates of Return
ISC	Inter-ministerial Steering Committee
LMP	Labor Management Procedures
M&E	Monitoring and Evaluation
MCA	Millennium Challenge Account
MEDD	Ministry of Environment and Sustainable Development (*Ministère de l'Environnement et du Développement Durable*)
MEER	Ministry of Infrastructure and Road Maintenance (*Ministère de l'Equipement et de l'Entretien Routier*)
MENA	Ministry of Education (*Ministère de l'Education Nationale et de l'Alphabétisation*)
MINADER	Ministry of Agriculture and Rural Development (*Ministère de l'Agriculture et du Développement Durable*)
MIRAH	Ministry of Animal Resources (*Ministère des Ressources Animales et Halieutiques*)
MRAI	Modified Rural Access Index
MSHP	Ministry of Health and Public Hygiene (*Ministère de la Santé et de l'Hygiène Publique*)
NDP	National Development Plan (*Plan National de Développement*)
ND-GAIN	Notre Dame Global Adaptation Initiative
NDC	National Determined Contribution
NGO	Non-Governmental Organization
NPV	Net Present Values
OCPV	Office for the Marketing of Food Products (*Office de Commercialisation des Produits Vivriers*)
OECD	Organisation for Economic Cooperation and Development (*Organisation de coopération et de développement économiques*)
OPBRC	Output and Performance-Based Road Contracts
OSER	Office of Road Safety (*Office de la Sécurité Routière*)
PACOGA	Greater Abidjan Port City Integration Project (*Projet d'Appui à la Compétitivité du Grand Abidjan*)
PAD	Project Appraisal Document
PAO	Professional Agricultural Organization
PBC	Performance-Based Condition
PCU	Project Coordination Unit
PDO	Project Development Objective
PIDUCAS	Infrastructure Project for Urban Development and Competitiveness of Secondary Urban Areas (*Projet d'Infrastructures pour le Développement Urbain et la Compétitivité Des Agglomérations Secondaires*)
PIM	Project Implementation Manual
PIP	Priority Investment Program
PPSD	Project Procurement Strategy for Development
PRICI	Côte d'Ivoire Infrastructure Renaissance Project (*Projet de Renaissance des Infrastructures de Côte d'Ivoire*)

PSI	Project Safety Impact
RAI	Rural Access Index
RAMS	Road Asset Management System
RCC	Regional Consultative Committees
RED	Road Economic Decision (Model)
RFP	Request for Proposal
RPF	Resettlement Policy Framework
RSSAT	Road Safety Screening and Appraisal Tool
RTU	Regional Technical Unit
SEA	Sexual Exploitation and Abuse
SEP	Stakeholder Engagement Plan
SH	Sexual Harassment
SIA	Specialized Implementation Agency
SME	Small and Medium Entreprise
SODEFOR	Forestry Development Society (*Société de Développement des Forêts*)
SODEXAM	Airports, aeronautics and meteorology operation and development company (*Société d'Exploitation de Développement Aéroportuaire Aéronautique et Météorologique*)
SORT	Systematic Operations Risk-Rating Tool
STEM	Science, Technology, Engineering and Mathematics
TA	Technical Assistance
TPM	Third-Party Monitoring
ToR	Terms of Reference
UNDP	United Nations Development Program

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DATASHEET

BASIC INFORMATION

Country(ies)	Project Name	
Cote d'Ivoire	Cote d'Ivoire Inclusive Connectivity and Rural Infrastructure Project	
Project ID	**Financing Instrument**	**Environmental and Social Risk Classification**
P178362	Investment Project Financing	Substantial

Financing & Implementation Modalities

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

Expected Approval Date	Expected Closing Date
28-Mar-2023	30-Jun-2029

Bank/IFC Collaboration

No

Proposed Development Objective(s)

The project development objective (PDO) is to provide inclusive and climate resilient rural road connectivity in selected underserved regions of Cote d'Ivoire

Components

Component Name	Cost (US$, millions)
Component 1: Inclusive and Resilient Rural Connectivity Infrastructure	449.10
Component 2: Rural Socio-economic Infrastructure	76.00
Component 3: Capacity Building, Support to Institutional Framework and Sector Strategy	11.80
Component 4: Support to Project Management	34.20
Component 5: Contingent Emergency Response Component (CERC)	0.00

Organizations

Borrower:	THE REPUBLIC OF COTE D'IVOIRE
Implementing Agency:	Coordination Unit for Infrastructure Projects in Côte d'Ivoire (CC-PRICI)

PROJECT FINANCING DATA (US$, Millions)

SUMMARY

Total Project Cost	571.20
Total Financing	571.20
of which IBRD/IDA	300.00
Financing Gap	0.00

DETAILS

World Bank Group Financing

International Development Association (IDA)	300.00
IDA Credit	300.00

Non-World Bank Group Financing

Counterpart Funding	71.20
Borrower/Recipient	71.20
Other Sources	200.00

Asian Infrastructure Investment Bank	200.00

IDA Resources (in US$, Millions)

	Credit Amount	Grant Amount	SML Amount	Guarantee Amount	Total Amount
Cote d'Ivoire	300.00	0.00	0.00	0.00	300.00
Scale-Up Window (SUW)	300.00	0.00	0.00	0.00	300.00
Total	**300.00**	**0.00**	**0.00**	**0.00**	**300.00**

Expected Disbursements (in US$, Millions)

WB Fiscal Year	2023	2024	2025	2026	2027	2028	2029	2030
Annual	0.00	30.00	70.00	60.00	50.00	40.00	30.00	20.00
Cumulative	0.00	30.00	100.00	160.00	210.00	250.00	280.00	300.00

INSTITUTIONAL DATA

Practice Area (Lead)

Transport

Contributing Practice Areas

Agriculture and Food, Climate Change, Digital Development, Fragile, Conflict & Violence

Climate Change and Disaster Screening

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

SYSTEMATIC OPERATIONS RISK-RATING TOOL (SORT)

Risk Category	Rating
1. Political and Governance	Moderate
2. Macroeconomic	Moderate
3. Sector Strategies and Policies	Moderate
4. Technical Design of Project or Program	Moderate
5. Institutional Capacity for Implementation and Sustainability	Substantial
6. Fiduciary	Moderate

7. Environment and Social	Substantial
8. Stakeholders	Substantial
9. Other	Substantial
10. Overall	Substantial

COMPLIANCE

Policy

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

[ ] Yes [✓] No

Does the project require any waivers of Bank policies?

[ ] Yes [✓] No

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

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

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

Legal Covenants

Sections and Description
Schedule 2, Section I.A.3.d: No later than three (3) months after the Effective Date, the Recipient shall establish a decentralized office of the PCU in one of the Selected Regions headed by the deputy-coordinator

Sections and Description
Schedule 2, Section I.A.4.a: The Recipient shall, no later than three (3) months after Effective Date, establish and thereafter maintain, a committee "Regional Consultative Committee" or "RCC"), in each of the Selected Regions, each with terms of reference, composition and resources acceptable to the Association.

Sections and Description
Schedule 2, Section I.A3.c: The Recipient shall recruit or assign, no later than three (3) months after the Effective Date, the following additional key staff to strengthen the PCU: (i) one (1) deputy-coordinator responsible for facilitating the day-to-day operations and follow-up of Project activities; (ii) environmental and social specialists as described in the ESCP, and (iii) one (1) security specialist to monitor the security situation.

Sections and Description
Schedule 2, Section I.D.1: The Recipient shall, not later than one (1) month after the Effective Date for the Fiscal Year in which this Agreement shall become effective, and November 30 of each subsequent Fiscal Year, consolidate and furnish to the Association for the Association's no objection, a consolidated annual program of activities proposed for implementation under the Project during the following Fiscal Year, together with a proposed budget which shall include the funds from the Financing, as well as any other funds which may become available for the implementation of the Project

Sections and Description
Per ESCP, the SEA / SH Prevention and Management Action Plan shall be developed, disclosed, consulted upon, and adopted no later than 90 days after the project effectiveness

Conditions

Type	Financing source	Description
Effectiveness	IBRD/IDA	The Recipient has set up the Inter-ministerial Steering Committee (ISC) in accordance with the Implementation Arrangements section of the Financial Agreement
Type	Financing source	Description
Effectiveness	IBRD/IDA	The Recipient has signed delegated management contracts with the following specialized implementing agencies: AGEROUTE, SODEFOR, ANSUT, and SODEXAM, in accordance with the Implementation Arrangements section of the Financing Agreement

Type	Financing source	Description
Effectiveness	IBRD/IDA	The Recipient has prepared and adopted a Project Implementation Manual, in accordance with Section I.C Schedule 2 of the Financing Agreement

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I. STRATEGIC CONTEXT

A. Country Context

1. Côte d'Ivoire's economy is on a recovery path. Côte d'Ivoire has enjoyed vibrant, robust, and stable economic growth since 2012, but experienced a slowdown in 2020 owing to the COVID-19 crisis. The average economic growth rate during 2017-2019 was about 6.9 percent and fell to 2 percent in 2020 (with a real capita decline of 0.6 percent). However, the economy of Côte d'Ivoire has been relatively resilient throughout the pandemic and among the best performing economies in Sub-Saharan Africa. Agriculture, particularly cocoa products, held up well during the crisis. Both manufacturing and services supported the recovery during the second half of 2020.[1] Assuming global conditions continue to normalize, the International Monetary Fund (IMF) projects that the Gross Domestic Product (GDP) growth will reach 6.4 percent in 2023 (5.7 percent in 2022).[2] In the short term, the economic recovery will be supported by government investment as well as a strong recovery of private sector investment and consumption. The fiscal deficit is high, mainly because of government COVID-19 response measures, but expected to remain stable at 7.1 percent of GDP in 2022.[3] Continuing structural reforms are needed to achieve the government's more ambitious targets set out in the Government's National Development Plan 2021-2025 (NDP 2021-2025).

2. The NDP 2021-2025 presents Côte d'Ivoire's ambition to double GDP per capita by 2030 from US$1,736 in 2020. The NDP sets up the government's development objectives including accelerating economic transformation, reducing poverty and inequality, and improving governance. To achieve these goals, Côte d'Ivoire will have to improve domestic resource mobilization, its business environment, as well as the efficiency and allocation of public spending in education, healthcare, and rural development to make growth more inclusive and equitable.

3. While the poverty level of Côte d'Ivoire declined by 6.9 percent, from 46.3 percent in 2015 to 39.4 percent in 2020, this reduction was confined to urban areas.[4] Meanwhile, rural poverty levels increased by 2.4 percent over the same period. Côte d'Ivoire is one of the most urbanized countries in Sub-Saharan Africa. About 56 percent of Côte d'Ivoire's population lives in urban centers, with urbanization increasing by 5 percent yearly, with high spatial disparity between the Greater Abidjan Area (GAA) and other cities. While the GAA continues to experience rapid urbanization and significant economic development, secondary cities lag, particularly those in the North of the country.

4. The northern regions[5] of Côte d'Ivoire have a higher incidence of poverty and lag behind in terms of human capital development. Constituting almost half of the country, the northern regions (in total about 165,000 km^2) have low population densities, but poverty levels are among the highest in the

1 https://www.worldbank.org/en/country/cotedivoire/overview#1
2 IMF Executive Board 2022 Article IV Consultation with Côte d'Ivoire based on Ivoirian authorities, World Bank, and IMF staff estimates.
3 World Bank, 2020. Cote d'Ivoire 10th Economic Update: Cote d'Ivoire and the COVID-19 Pandemic.
4 https://www.worldbank.org/en/country/cotedivoire/overview#1
5 In the context of this project, the northern part of Côte d'Ivoire is considered as 11 regions, including Bafing, Worodougou, Béré, Hambol, Gontougo, and the six border regions (Kabadougou, Folon, Bagoue, Poro, Tchologo, and Bounkani). There are a total of 33 regions in the country.

country. Accounting for about 20 percent of the country's population, approximately 4.08 million people lived in the northern regions of Côte d'Ivoire in 2020, with 68 percent inhabiting rural areas. There are only two cities in the northern regions with more than 100,000 residents. Ten out of the 11 northern regions have a poverty rate higher than the national average (39 percent). The average poverty rate in the rural areas of the northern regions is 57 percent while the rate in the urban areas is 40 percent. Figure 1 below displays income poverty levels in Côte d'Ivoire.

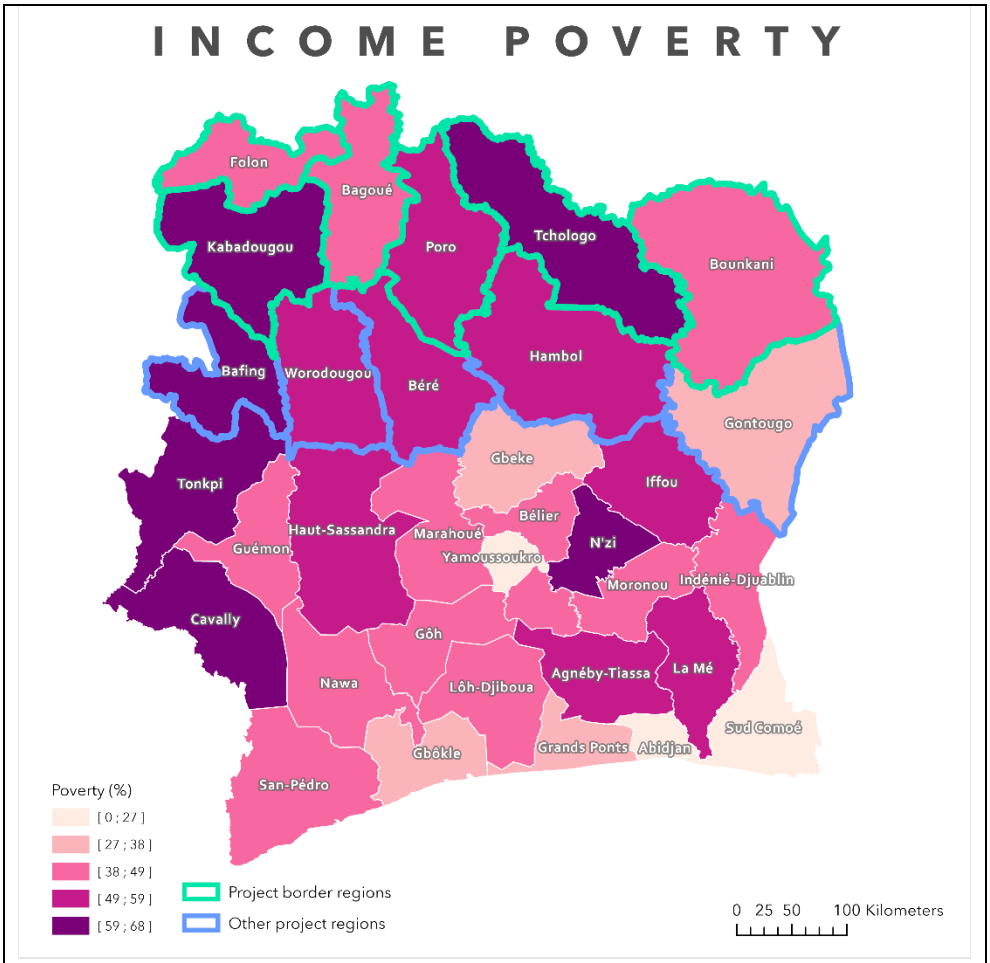


Figure 1: Regional income poverty rates in Côte d'Ivoire in 2020.[6]

5. The inadequate education and poor health conditions in northern Côte d'Ivoire are on account of the lack of access to health and education facilities. Maternal health is considered poor in the 11 regions where dropout rates for antenatal consultations are 65 percent higher than the national average and about 16 percent of deliveries occur outside of a health center[7]. This is partially caused by the lack of accessible roads from households to health facilities. In addition, school enrolment in the northern regions is below the national average, with high dropout rates, especially for girls at the secondary school level**.** The gender gap in secondary school enrolment is about 20 points in the regions of Bafing, Bounkani and

[6] World Bank staff estimates based on EHCVM2018/2019
[7] Demographic and Health Survey: https://dhsprogram.com/pubs/pdf/FR272/FR272.pdf

Worodougou. The northern regions bordering Burkina Faso and Mali (i.e. Folon, Bagoue, Poro, Tchologo and Bounkani) have the lowest primary school enrollment rates for girls in the country.

6. **Although the employment rate is high in rural northern regions, overall household income remains low compared to the southern regions.** In 2018, the employment to working-age population ratio in rural areas was about 86 percent at the national level and 90 percent in the rural northern regions. The working-age population is predominantly self-employed in the agricultural sector. The poorer northern regions are more involved in traditional food crops whereas cash crops are produced in the richer southern regions, benefiting from higher and more reliable rainfall and better soil. The food crop subsector in the northern regions consists primarily of yams, maize, and rice. It receives little support from both the public and private sectors.

7. **The situation is worse in the six border regions (Bagoué, Bounkani, Folon, Kabadougou, Poro and Tchologo) because of deep structural vulnerabilities and the spillover of violence from the Sahel; they have a higher concentration of violent incidents compared to the rest of the country.** The number of attacks from Jihadist affiliated groups have increased along the northern border with Mali and Burkina Faso, while clashes between farmers and herders from the Sahel have exacerbated insecurity in the North. Sikasso in Mali, as well as Boucle du Mouhoun, Hauts-Bassins and Cascades in Burkina Faso are experiencing active conflict, which heightens the risk of contagion to the northern most part of Côte d'Ivoire. The destabilization of Burkina Faso is leading to a regrouping of the jihadist movements in northern Côte d'Ivoire, particularly in the North-East, in the Comoé forest between Bouna and Ferkessédougou. Other vulnerable areas include Tengréla near the border with Mali and Ouangolodougou close to the border with Burkina Faso. This insecurity exacerbates migration and displacement to Côte d'Ivoire, further contributing to a worsening of intra-community relations. Besides security concerns, community, socio-economic and criminality risks need to be mitigated.

8. **Sexual, gender-based, and intimate partner violence remains a critical issue in Côte d'Ivoire.** In 2014, the Government of Côte d'Ivoire (GoCI) adopted a national strategy to combat and prevent gender-based violence. In addition to strengthening existing mechanisms, this strategy set up the national collection of gender-disaggregated data. Nevertheless, the lives of women and girls are still marked by gender-based violence. In fact, domestic violence is the main form of physical violence suffered by women, and a significant proportion of the population (22 percent) believes that violence may be justified in some cases.[8]

9. **Compared to men, women in Côte d'Ivoire face disadvantages in multiple domains such as education, productivity, and employment.** Women are under-represented in salaried jobs and the majority hold an inferior status; most women work in the informal sector.[9] The United Nations Development Program (UNDP)'s Gender Inequality Index (GII) for Côte d'Ivoire stands at 0.811 in 2020 (vs. 0.57 for sub-Saharan Africa), ranking 162 out of 189 countries; this reflects the gaps between men and women in health, education, political representation, and labor participation. Many of the human capital outcomes are the result of women's limited access to services, such as family planning,

[8] Organisation for Economic Cooperation and Development OECD (2022), Institutions sociales et égalité femmes-hommes en Côte d'Ivoire : Rapport pays SIGI, Éditions OCDE, Paris, https://doi.org/10.1787/c798990a-fr.

[9] OECD (2022), *Institutions sociales et égalité femmes-hommes en Côte d'Ivoire : Rapport pays SIGI*, Éditions OCDE, Paris, https://doi.org/10.1787/c798990a-fr.

professional obstetric care, and antenatal, neonatal, and postnatal care. Low transition rates to secondary schooling deprive girls of a complete education, leading to school dropout, early marriage and pregnancy.[10] The lower secondary education retention rate is lower for girls than for boys. The share of youth without employment, education or training is 44.2 for women compared to 25.4 for men,[11] which reflects the gap in opportunities faced by Ivoirian women.

10. Climate change causes hydrometeorological related disasters like river flooding, extreme heat, wildfire and water scarcity in Côte d'Ivoire.[12] The country's economy relies heavily on the agricultural sector which is sensitive to climatic conditions and vulnerable to climate change. Côte d'Ivoire ranks 142 out of 182 countries in the Notre Dame Global Adaptation Initiative (ND GAIN) Index, revealing that it is among the countries with high vulnerability to climate change impacts and low readiness to enhance resilience.[13] Côte d'Ivoire is also exposed to many climate-related diseases such as malaria. From 1980 to 2020, Côte d'Ivoire experienced 14 floods and 13 epidemics.[14]

11. The north of the country is exposed to both droughts and flooding which are expected to increase in frequency. Climate projections (SSP5-8.5 scenario) indicate an increase of 1°C in maximum temperatures by mid-century (32.44°C in 2022 and 33.5°C in 2050). The projected number of hot days (Tmax>35C) in the country is anticipated to increase from 81.27 in 2022 to 116.02 in 2050 with higher increases in the northern provinces. The projected overall country precipitation levels show a decline from 1383mm in 2022 to 1372.19mm in 2050[15].

12. Women's vulnerability to climate change is higher, with a compounded impact on their already disadvantaged access to jobs and services. The country's National Determined Contribution (NDCs)[16] indicate that gender roles, labor division, economic gaps, and time spent between domestic tasks and family care make women more vulnerable to the negative consequences of climate change and put them at a disadvantage for benefitting from adaptation opportunities. Moreover, extreme heat negatively affects women's health during pregnancy and menopause.

13. Ensuring inclusive and resilient connectivity and access to economic and social development opportunities will help address multidimensional fragility and bring transformational impact in Northern Côte d'Ivoire. The proposed project will support a holistic approach to improve rural

[10] Sustaining High, Inclusive, and Resilient Growth post Covid-19. A World Bank input to the 2030 Development Strategy.
[11] ILOSTAT Explorer, accessed February 22, 2022.
[12] Think Hazard, consulted on February 03, 2022. URL: 66-cote-d-ivoire
[13] The Notre Dame Global Adaptation Index (ND GAIN) summarizes a country's vulnerability to climate change in combination with its readiness to improve resilience. ND-GAIN measures overall readiness by considering three components - economic readiness, governance readiness and social readiness. Further information on definition and methodology can be obtained in URL: *https://gain.nd.edu/our-work/country-index/methodology/*. Scores for 2019. Notre Dame Global Adaptation Initiative, consulted on 24 June 2022. URL: *https://gain.nd.edu/our-work/country-index/rankings/*
[14] Climate Change Knowledge Portal, Consulted on 29 September 2022.
URL: https://climateknowledgeportal.worldbank.org/country/cote-divoire/vulnerability
[15] Climate Change Knowledge Portal, consulted on 24 June 2022.
URL: https://climateknowledgeportal.worldbank.org/country/cote-divoire/climate-data-projections
[16] Côte d'Ivoire 2nd Nationally Determined Contribution, 9 May 2022. URL: https://unfccc.int/sites/default/files/NDC/2022-06/CDN_CIV_2022.pdf

connectivity, responding to social, economic and climate challenges in selected rural areas. It will also contribute to the objective of addressing the root causes of fragility in the North, preventing the further spread of violence from the Sahel, mitigating climate change risks and increasing gender equality.

B. Sectoral and Institutional Context

14. Rural connectivity is a major factor driving persistent disparities between and within regions in Côte d'Ivoire. There are significant disparities in physical connectivity across the 11 northern regions of the country. The Modified Rural Access Index (MRAI)[17] is on average 77 percent for the 11 northern regions with notable differences between regions (Figure 2 and 3 below). This average corresponds to approximately 920,000 people living in a situation of pronounced isolation. The six border regions account for approximately 460,000 people. Because of limited access to goods, services and equipment, this population is particularly vulnerable to fragility and poverty.

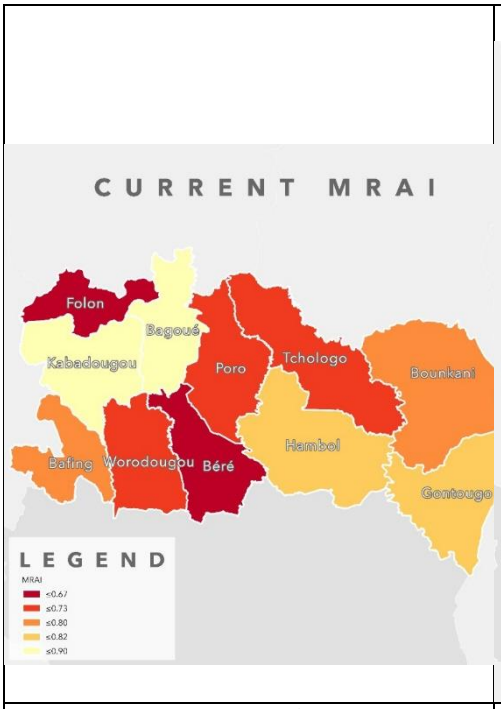


Figure 2: MRAI by region[18].

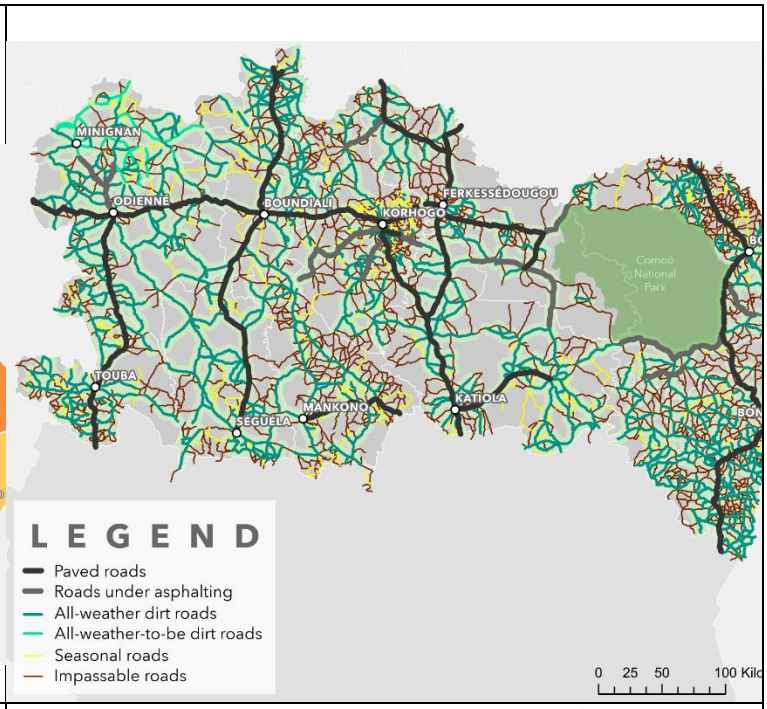


Figure 3: Road network condition in the 11 regions[19].

15. Deficient logistics infrastructure severely constrains producers' access to markets. Aside from the limitations of the road network, agriculture faces important challenges from the lack or dysfunction of logistics chains in production areas, including in exchange points. Rural markets and collection points

[17] Share of the rural population located less than five kilometers from an all-weather passable road.
[18] Source (including the various network maps): World Bank staff, based on data provided by AGEROUTE. This MRAI is clearly overestimated, insofar as, in the absence of precise data, all roads that have been improved/rehabilitated since 2017 are considered to be fair all year, knowing that there has been no subsequent maintenance.
[19] From AGEROUTE's road database. A seasonal road is a dirt road that is only passable during the dry season. 'All-weather-to-be dirt roads' are dirt roads currently under construction that will soon be passable year-round (i.e. all-weather). "Impassable roads": usually small tracks or roads completely cut off from vehicle traffic.

are poorly equipped with cold storage, warehouses, sheds and sanitation facilities, among others. Consequently, post-harvest losses[20] remain high, producer incomes remain low, and incentives to improve quality are undermined.

16. The implementation of rural roads works is challenged by insufficient capacity in road construction and maintenance as well as in contract management. According to AGEROUTE (ageroutemarche.ci - platform for road works monitoring) most small works contracts are poorly executed. Moreover, experience from ongoing World Bank financed projects highlights issues in contract management by public entities, particularly with non-performing contractors (enforcement of coercive measures including notices to correct, penalties etc.).

Gender

17. Rural women in Northern Côte d'Ivoire are disproportionally affected by the poor quality of the road network. The low density of health services and the poor quality of roads limit women's access to health services in the North and reinforces local norms against modern medical treatment. For example, in the Tchologo region, women rarely attend modern health services and often miss prenatal appointments. Analysis shows that road connectivity increases the accessibility and quality of health services for women by: (i) increasing the potential supply of medical staff; (ii) facilitating the restocking of medicine and other provisions; and (iii) increasing the availability of medicines and vaccines. To some extent, it also strengthens the willingness for women to get professional medical services.[21]

18. Women's productivity is more influenced by considerations of commuting time, travel cost and safety. In the agriculture sector, which has the most employment opportunities, 31 percent of women are employed compared to 46.6 percent of men.[22] Women's productivity is inhibited on account of insufficient access to farming technology, tools and new crops, and their household and family priorities. This gender gap is further aggravated by the imbalanced distribution of income.[23] Eighty-five percent of women are engaged in precarious jobs compared to 64 percent of men. Analysis from the Advisory Services and Analytics (ASA) on rural connectivity[24] indicates that better connectivity can help address the gender gap by improving women's access to agriculture opportunities and reducing travel time from households to more and better jobs. Improving travel time and equity in land use by increasing proximity to services and markets can help address women's time poverty, which constrains their mobility as gender norms lead them to manage household and remunerated activities.[25] In the North, women often use bicycles to work and are accompanied by children. The quality and safety of roads matter more to women's agrobusiness competitiveness than men's since women are more impacted by safety, commuting time and travel cost considerations.

[20] For perishable products such as fruits and vegetables, post-harvest losses as high as 30 percent of total production are registered.
[21] TDS-Group - AFD - *Étude Sécuritaire - District des Savanes en Côte d'Ivoire* - Septembre 2021,
[22] ILOSTAT Explorer, accessed February 22, 2022.
[23] Gender differences in Agricultural Productivity in Côte d'Ivoire: Changes in Determinants and Distributional Composition over the Past Decade (2008-2016), World Bank 2020.
[24] ASA Rural Connectivity in Northern Cote d'Ivoire (P174829).
[25] Rijak Grover (2019). "Far from the Factory? Investigating how women travel to work in rural Côte d'Ivoire. Journal of International Women's Studies." Vol 20: 4.

19. Prevalent gender stereotypes tend to limit women's employment opportunities to low-wage sectors. Women earn much less than men, reflecting their concentration in economic sectors where income levels are lower, be it agriculture, retail and wholesale.[26] In sectors with higher wages such as transport, construction and industry, women have very few job opportunities. According to data from International Labor Organization (ILO), only four percent of the workforce employed in the transport sector are women.[27] In the case of the construction sector, the employment rate of men is fifty times that of women.[28] In addition, there are strong gender stereotypes about women participating in STEM (Science, Technology, Engineering and Mathematics). Thirty-two percent of the population view men as having better skills than women on mathematics and physical sciences while only four percent of the population believes the opposite.[29] Similar to other sub-Saharan African countries, existing gender stereotypes in the infrastructure sector, the absence of gender considerations in recruitment and promotion, potential sexual harassment (SH) and safety in the workplace, inadequate facilities, and rigid working conditions make it challenging and less attractive for women to work in the public works sector. Data from current road construction projects reveal the employment segregation levels of the road sector in Côte d'Ivoire:[30] women represent only eight percent of the total workforce, nine percent of senior executives, ten percent of engineers and eight percent of middle managers.

Road safety

20. Road safety is a major development challenge in Côte d'Ivoire. The economic losses linked to road crashes account for 7.8 percent of GDP with 63 percent of road crash fatalities among the economically productive age groups (15-64 years). 865 life-years per 100,000 inhabitants are impacted by road crash injuries (Global Road Safety Facility – GRSF Country Profiles - 2020).[31] Most crashes take place in urban centers and on paved roads. In rural areas, road users are exposed to safety risks due to poor road conditions, disturbances from construction works and a lack of safety training and awareness. Vulnerable road users include motorcyclists, pedestrians, and cyclists, most of whom are women.

21. There is no clear strategy to guide rural road development towards better resilience and safety. The current strategy guiding rural roads management and maintenance was prepared in 2015 and revised in 2018 as part of the Agricultural Investment Project (*Projet d'Appui au Secteur Agricole*, PSAC, P119308). However, it has not been formally approved and is only partially being implemented. The strategy needs further improvement with a better framework to guide investment programs, including from a road safety perspective.

Climate

22. Climate hazards, particularly heavy rainfall and extreme heat, exacerbate the problems of rural connectivity, causing significant and recurrent road damage and disruptions across the network. Analysis[32] indicates that a significant portion of the road network is in the 20-year flood zone, with the

[26] OECD. (2022). *Op. cit*. Paris: OECD, p. 25: https://www.oecd-ilibrary.org/docserver/c798990a-fr.pdf
[27] ILOSTAT Explorer, accessed on June 2022: https://www.ilo.org/shinyapps/bulkexplorer32/?
[28] ILOSTAT Explorer, accessed February 22, 2022.
[29] OECD. (2022). *Op. cit*. Paris: OECD, p. 23: https://www.oecd-ilibrary.org/docserver/c798990a-fr.pdf
[30] Based on a sample of the five biggest works contracts in Côte d'Ivoire, August 2022.
[31] GRSF website. *https://www.roadsafetyfacility.org/country/cote-divoire*
[32] ASA Rural Connectivity in Northern Côte d'Ivoire (P174829).

region of Bagoue most exposed, and an otherwise relatively homogeneous exposure across the 11 regions. Yet, the rural roads strategy has not taken climate adaptation into account. The increasing likelihood of a resurgence of extreme weather will disrupt connectivity, and aggravate poverty, insecurity, and land conflicts. Reducing the climate vulnerability of the rural road sector is critical and requires incorporating climate resilience measures into road works.

23. Improving the overall climate resilience of rural Côte d'Ivoire is linked to building resilience in rural infrastructure and reforestation. In addition to the rural road network, other rural infrastructure such as market facilities and water management facilities need to incorporate climate resilience measures into their design and construction. At present, agricultural markets' facilities are not prepared to cope with extreme heat and flooding events. The provision of sheds and drainage facilities would reduce the vulnerability of marketing activities to the impacts of extreme heat and flooding. The provision of cold storage and warehouses would promote the safety of food products, enabling commerce activities to continue and communities to access food during extreme weather events and potential transport disruptions. Given the extent of deforestation,[33] reforestation along roads is necessary to protect nearby residents and road users from climate risks.

Institutional context

24. High centralization and the low capacity of local governments. The management of public affairs is highly centralized at the central government level. While local institutions (regional councils and municipalities) exist, they have little power and means of action, functioning essentially on transfers from the State. Regional councils carry out some investments in the territories, and therefore have managerial staff, particularly at the level of technical services. However, municipalities are much weaker, especially outside big cities. The national territory of Côte d'Ivoire is not entirely "communalized."[34] Of the 11 regions targeted by the project, there are a total of 165 basic administrative districts, of which only 75 are municipalities. There are, therefore, 90 non-municipalized territories that are administered by sub-prefects (representatives of the central government) and fall under the decentralized local competences of regional councils. Access to basic services in these territories is limited, with municipalities receiving financial transfers from the Government to cover certain needs.

25. Rural connectivity is challenged by a combination of factors such as unclear sector governance arrangements, overdesigned technical standards for construction, lack of maintenance and limited financial resources. There is no clear maintenance strategy, even for the core network. Despite important efforts, a significant part of the rural network (estimated at 53 percent in 2018) has not been subject to effective maintenance in recent years. There is a lack of clear and systematic strategy on road maintenance and rehabilitation. Furthermore, the adopted standards refer to high service levels for rural roads,[35] the unit costs of which are not affordable considering the current fiscal situation of the country.[36] While the country has a Road Maintenance Fund (*Fonds d'Entretien Routier,* FER) with significant financial resources (about CFAF 100 billion equivalent to US$200 million in 2020),[37] the FER is mainly used for

[33] The country has lost 90 percent of its vegetation cover in the last 60 years.
[34] Without decentralized local administration.
[35] Including reference speeds of more than 60km/h as for paved roads.
[36] From fuel levy, vehicles vignettes and road tolling.
[37] FER management report, 2020.

capital investments in the core network. The source of funding is not clearly defined for the rural road network, which accounts for almost 55 percent of the total network and serves half of the population.

26. The FER is gradually coming out of a financially vulnerable situation. A strategy to settle payment arrears to contractors and various service providers (mainly those who performed the 2018-2020 rural road program) is under execution, for a total of more than US$120 million.[38] Administrative and financial procedures have been developed, including internal and external audits. The main problem remaining to be solved is the direct channeling of resources from Ministry of Finance to the FER.

27. Addressing Côte d'Ivoire's rural connectivity challenges requires stronger coordination between the multiple stakeholders involved across sectors and at the central and local levels There are multiple actors involved in the management of rural roads, with some overlap in responsibilities. Since 2018, AGEROUTE (the Road Management Agency) has significantly rehabilitated rural roads using funding from FER and development partners. AGEROUTE's programming strategy is based on road surveys resulting in a priority classification of villages. Under the patronage of the of Agriculture and Rural Development (*Ministère de l'Agriculture et du Développement Durable*, MINADER), the cotton and cashew sectors have also been implementing road rehabilitation and maintenance programs using their own funds along with various donor contributions. Regional councils carry out some road rehabilitation activities using their own resources. In terms of coordination, regional committees have been set up although overlaps in the different road rehabilitation and maintenance programs continue. The lack of integrated planning sometimes leads to competition between various entities, including AGEROUTE, MINADER, agricultural producers and regional councils. In some cases, for example, two works contracts have been awarded for the same road section.

C. Relevance to Higher Level Objectives

28. The project will contribute to the World Bank's twin goals of eliminating extreme poverty and boosting shared prosperity. The project will directly and significantly improve living standards in rural areas through better access to basic services and economic opportunities. It will boost local economic development and improve access to non-agricultural job opportunities.

29. The proposed project is aligned with the Country Partnership Framework (CPF) for Côte d'Ivoire for FY23–FY27 (Report number 178156). The CPF has three High Level Objectives (HLO): (1) Improved human capital; (2) Reduced spatial disparities and strengthened resilience; and (3) Jobs created through private sector led growth, as well as three cross-cutting themes: (i) Climate change; (ii) Digital Development and Information and Communication Technology (ICT); and (iii) Gender equality and Female Empowerment. The project is fully embedded in HLO2 and will directly contribute to Objective 4 (Expand connectivity through quality climate-resilient infrastructure) through (i) investments in rural connectivity, which is essential to reduce regional disparities and strengthen the rural supply chain for agricultural productivity; (ii) the maintenance and improvement of road infrastructure for climate resilience and better services, to avoid premature degradation and impassibility of the road sections; and (iii) a comprehensive rural connectivity strategy for better targeted investments. The project will also contribute to HLO 3 (Objective 10: Develop skills for a competitive private sector) through the development of skills for youth to be employed by the private sector, with a focus on women. The project

[38] FER management report, 2020.

will support achievement to the Objective 2 (Expand equity of, and access to, improved quality basic services, particularly for youth and women) under HLO1, through investments in basic services in small urban centers, schools and health centers. In addition, the project will address the constraints and enable the drivers of the three cross-cutting themes, by supporting expansion of digital network along road corridors, better rainwater management to mitigate damages from climate hazards, and promoting gender equality by empowering women with more job opportunities and better access to public services.

30. The project is also consonant with the World Bank's Western and Central Africa priorities for 2021-2025 outlined in the "Africa ACT, Adapt, Connect and Transform" report. It contributes to its four transformational goals: (a) create a new social contract through activities to reinforce trust between citizens and the State by improving service delivery and security, strengthening local authorities and citizen engagement at the community level; (b) remove bottlenecks that prevent creating more and better jobs through investments in economic infrastructure to support rural urban value chains; (c) strengthen human capital through interventions to improve conditions in health and education facilities, with a focus on women and girls; and (d) ramp up climate resilience by increasing the ability to (i) absorb climate shocks through better rainwater management and (ii) adapt to climate change through tree planting and better rainwater management, including related capacity building.

31. The project is fully in line with the country's NDP 2021-2025. The NDP seeks to accelerate economic transformation, reduce poverty and inequality, and improve governance. In particular, the project will support the achievement of Pillar 1 (competitive economic clusters, infrastructure to support growth, environment, fight against climate change), Pillar 2 (Human capital), Pillar 3 (Inclusion) and Pillar 5 (Governance and State's modernization).

32. The project will support the implementation of the country's NDC, the World Bank Group's 2021-2025 Climate Action Plan[39] and the Next Generation Africa Climate Business Plan[40]. The project encompasses investments in rural roads to enhance access and connectivity to rural communities without causing deforestation. The priorities identified to achieve NDC include increasing resilience of infrastructure, building capacity on integrating climate adaptation into land use planning, rehabilitating degraded lands, reforestation to enhance carbon stocks in degraded forests, and improving management of water resources. The project will help reduce climate vulnerability and enhance climate resilience of the transport sector through adequate road maintenance and application of climate-resilience measures[41]. The application of the "Green Roads for Water" approach will allow to protect roads while harvesting rainwater. The project ensures the consolidation of the agricultural logistic chain and gender considerations by facilitating women´s participation in rural markets and assuring an all-yearlong access.

[39] World Bank Group. 2021. *World Bank Group Climate Change Action Plan 2021–2025: Supporting Green, Resilient, and Inclusive Development*. https://openknowledge.worldbank.org/handle/10986/35799 License: CC BY 3.0 IGO

[40] *The Next Generation Africa Climate Business Plan: Ramping Up Development-Centered Climate Action*. World Bank. https://openknowledge.worldbank.org/handle/10986/34098 License: CC BY 3.0 IGO.

[41] For more details on this, see Raffaello Cervigni, Andrew Losos, Paul Chinowsky, and James E. Neumann. *Enhancing the Climate Resilience of Africa's Infrastructure: The Roads and Bridge Sector*. Africa Development Forum series. World Bank. Authors explain that "in the absence of an adequate maintenance regime, the damage caused by climactic events is exacerbated". On rural roads, regular maintenance of bridges, culverts and drainage structures to ensure they are functional and not obstructed; maintenance and improvement of slope protection works; and systematic assessments to identify and incrementally address vulnerable and critical road sections are the first defense to climate risks.

Investments to protect forested areas and rehabilitate transhumance corridors will also contribute to the climate resilience and mitigation.

33. The project is fully aligned with the World Bank Group Strategy for Fragility, Conflict and Violence (FCV 2020-2025). The project seeks to address some of the main fragility and conflict dimensions in the North of Côte d'Ivoire by reducing regional marginalization and disparities, improving rural connectivity and access to services and economic opportunities, and supporting community resilience in a region affected by insecurity and the spillovers of violence from the Sahel. This is in line with the first pillar of engagement of the FCV Strategy that highlights the importance of preventive approaches, and addressing risks and grievances early on. The project is also aligned with several of the guiding principles outlined in the FCV Strategy, including: (i) differentiation – by tailoring the project to the specifics of FCV dimensions and placing special emphasis on the spatial dimensions of FCV patterns; and (ii) inclusion – by placing emphasis on areas where exclusion and marginalization are especially high.

34. The project is in line with the four pillars of the World Bank Global Crisis Response Framework (GCRF). The project contributes to the Pillar 1 Responding food insecurity by supporting agricultural logistics and rural market facilities through Component 2. The Pillar 2 protecting people and preserving jobs will be achieved by the project Component 1 by providing resilient and all-season access to the jobs, hospitals and schools, as well as creating job opportunities for domestic labors on the road improvement and maintenance works. The Pillar 3 strengthening resilience will be aligned through Component 3 through the support for the climate agenda in rural Côte D'Ivoire. Component 4 will contribute to the Pillar 4 Strengthening Policies, Institutions and Investments for Rebuilding Better, through improving the institutional capacity, policies and procedures for project management and implementation of the rural road and infrastructure projects. The project will, among other things, support and facilitate production, encourage gender equality, increase climate resilience, respond to disaster risk management, and strengthen institutional capacity which all are key aspects of the framework.

35. The project supports the achievement of many targets of the Sustainable Development Goals (SDGs), including the development of infrastructure for economic growth (9.1), urban-rural links (11.a), access to public spaces (11.7) climate change measures (13.2), water use efficiency (6.4), equal access to basic services (1.4), rural infrastructure (2.a), prevention of distortions (2.b), access to essential healthcare facilities (3.1), and equitable primary and secondary education (4.1).

II. PROJECT DESCRIPTION

A. Project Development Objective

PDO Statement

36. The project development objective (PDO) is to provide inclusive and climate resilient rural road connectivity in selected underserved regions of Côte d'Ivoire.

PDO Level Indicators

37. The proposed PDO indicators are the following:

- "Inclusive rural road connectivity": Modified Road Access Index in the selected regions (share of people with access to an all-season passable road within five kilometers).

- "Climate resilient rural road connectivity": People provided with improved climate resilient road access in the selected regions, of which female (number of people within five kilometers, percentage).
- Population reporting satisfaction with the quality of rural roads in their area (percentage, within five kilometers).

B. Project Components

38. Overall project concept. The project aims to provide climate resilient transport connectivity in selected underserved regions of Côte d'Ivoire, support rural socio-economic infrastructure, including the agricultural logistics chain, with measures to reduce impact from climate hazards, and build the institutional foundation in critical areas to ensure the sustainability of the road sector, including in road safety, road asset management, maintenance, planning and execution. The project is expected to benefit approximately 3.67 million people across the 11 regions (out of a total of 4.08 million),[42] including 1.91 million in the six border regions.

Component 1: Inclusive and Resilient Rural Connectivity Infrastructure (US$449.1 million equivalent, of which US$196.2 million from IDA, US$181.7 million from AIIB and US$71.2 million from GoCI)

39. Component 1 will finance the improvement of strategic[43] and non-strategic road networks to strengthen their resilience to climate risks and increase the rural populations' all-weather access to development opportunities. Currently, many roads are not passable due to damage from past climate hazards and the lack of climate resilient measures in construction and maintenance. For example, strategic roads - including the Dianra-Bouandougou road (113 km) - lack durable pavement to sustain service levels during extreme weather events. Non-strategic roads have river crossings which make them impassable and affect traffic flows on the overall road network. Installing climate-resilient measures and removing all traffic disruption points will help improve last mile commuting, which is usually done on foot or by Intermediate Means of Transport (IMTs – mainly 2-3 wheelers). This will improve inclusivity along the entire road network, benefiting as many people as possible. The project will apply climate resilience measures to improve the passability and service levels of roads in all seasons. This component will contribute to the Pillar 2 protecting people and preserving jobs in GCRF.

40. The project will support inclusive rural connectivity by increasing the MRAI to 90 percent in each of the regions. Resources will be concentrated on primary and secondary roads which are considered strategic from a social and economic point of view. These roads connect people to schools, health facilities and markets in towns. A strategic network is defined in each region based on the following criteria: (i) maximum contribution to MRAI (thus connecting the most populated agglomerations); and (ii) direct connection to health centers and secondary schools. The map below distinguishes four categories of roads in addition to the existing paved network: (i) roads under asphalting with government funding; (ii) roads eligible for development/rehabilitation under the project; (iii) roads to be maintained (developed/rehabilitated under previous programs); and (iv) other dirt roads (non-strategic).

[42] Based on the population figures of the 2014 general census. The overall MRAI in the 11 regions will therefore be 90 percent.
[43] Described in the paragraph below.

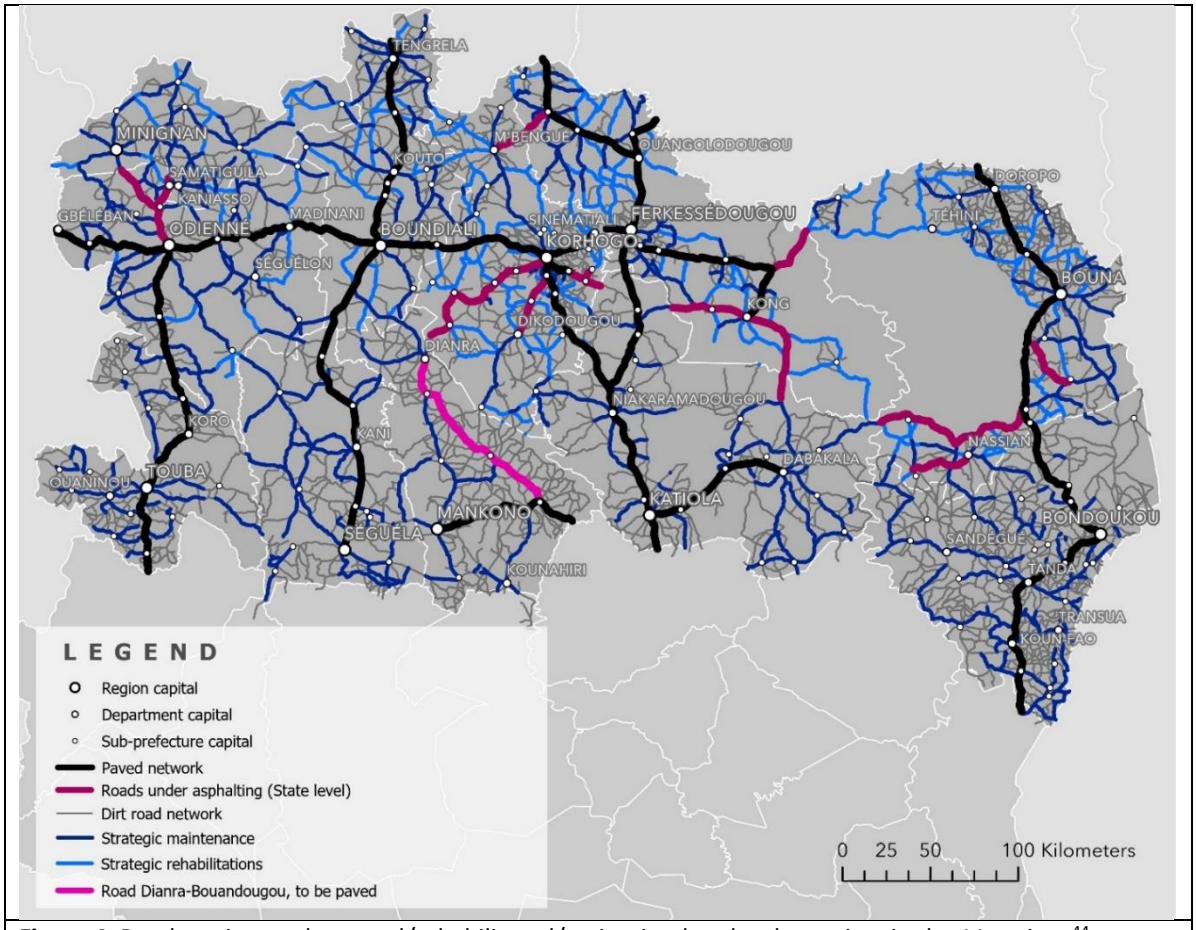


Figure 4: Road sections to be paved/rehabilitated/maintained under the project in the 11 regions[44].

Subcomponent 1.1: Rehabilitation and Upgrading of Strategic Roads to Climate-Resilient Standards (US$294.8 million, of which US$153.1 million from IDA and US$141.7 million from AIIB)

41. Subcomponent 1.1a will finance rehabilitating 7,450 km of the unpaved roads of the strategic network in the 11 regions, within their existing right of way. The subcomponent aims to complete ongoing works in the strategic network, improve climate resilience and restore all-season conditions through the rehabilitation and upgrading of hydraulic structures (mainly culverts and submersible slabs), the creation of drainage, the waterproofing of roadways, the rehabilitation of wearing courses and the installation of traffic signs.

42. Subcomponent 1.1.b will finance the upgrading of the Dianra-Bouandougou road (113 km) and the rehabilitation of the Bouandougou-Bouake-road (125 km) to address their vulnerability to climate change impacts. These are highly strategic roads not only for providing access to the Bere region, which is the main agricultural production basin of the 11 regions, but also for connecting the North to the town of Bouake, which is the main consumption/agricultural processing center in the country after Abidjan. These roads become impassable during the rainy season and are heavily impacted by flooding and rainfall erosion. To complete the digital network currently being financed by the government, the works will also

[44] From AGEROUTE's road database.

include the laying of a fiber optic cable along the roads, to be utilized by internet service providers enabling improved and affordable broadband access for users.

Subcomponent 1.2: Periodic and Routine Climate-Resilient Maintenance of the Strategic Network (US$127.5 million, of which US$29.2 million from IDA, US$27.1 million from AIIB and US$71.2 million from GoCI)

43. This subcomponent will improve the climate resilience of all strategic roads (15,250 km) in the 11 regions by carrying out periodic and routine maintenance throughout the project. It aims to maintain the accessibility level of all unpaved roads in the strategic network, including the 7,450 km to be rehabilitated under Subcomponent 1.1a. The works mainly consist of facilitating the drainage of rainwater and repairing structures and carriageways to increase the lifespan of those roads. The World Bank's financing will cover the first triennial maintenance program (2024-2026, 7,800 km each year). To meet a final target of 15,250 in 2029, FER will finance maintenance works for the 2027-2029 program and the roads rehabilitated under the project starting 2025. Performance-based disbursement conditions will be required for all these activities.

44. Activities of this subcomponent will be conducted through multi-year contracts, including a pilot on Output and Performance-based Road Contracts (OPBRC) to improve efficiency and reduce transaction costs. Multi-year contracts will allow for the gradual strengthening of the local public works sector by letting contractors, supervision engineering firms and their various partners (banks, insurance companies, etc.) have better visibility into their business. Further, 4 to 5-year long OPBRCs will be implemented on a pilot basis, covering approximately 1,000 km Experience from this pilot phase will be reflected in case of applying of OPBRCs to other road sections.

Subcomponent 1.3: Spot Climate-resilient Improvements of the Non-Strategic Network (US$26.8 million, of which US$13.9 million from IDA and US$12.9 million from AIIB)

45. This subcomponent focuses on the "non-strategic" network (about 23,000 km including sections within the 5 km MRAI) for which the targeted level of service is the reduction or the absence of traffic disruption points for trucks. Interventions will be mainly on roads classified as "impassable" and will be limited to the construction or rehabilitation of hydraulic structures (bridges and culverts). The plan is to build or rehabilitate a minimum of 600 structures in the 11 regions. Sections for intervention will be determined based on an analysis of the climatic vulnerability (level/duration of flooding) of the long list of roads identified by regional councils in cooperation with agricultural professional associations and AGEROUTE.

Component 2: Rural Socio-economic Infrastructure (US$76.0 million equivalent, of which US$63.5 million equivalent from IDA and US$12.5 million from AIIB)

46. This component aims to improve resilience and address fragility by amplifying the local spillover effects of improved connectivity through: (i) improving the agricultural logistics chain; (ii) enhancing social cohesion; (iii) increasing resilience to climate change; and (iv) supporting rural mobility. These investments are expected to complement investments made under Component 1 to maximize impact. The component will contribute to Pillar 1 Responding food insecurity of GCRF.

Subcomponent 2.1: Consolidation of the Agricultural Logistics Chain (US$26.2 million of which US$13.7 million from IDA and US$12.5 million from AIIB)

47. This subcomponent aims to develop the most important rural markets and complementary agricultural production collection points in the 11 regions. It will finance the installation of preventive and protective measures in rural market facilities to address climate change impacts on agricultural logistics. The intervention sites will be defined from a long list identified by the Regional Council of each region, with a preliminary assessment of priorities according to the following criteria: (i) exposure to climate risks such as flooding and extreme heat; (ii) proximity to an area of high agricultural production to ensure an optimal level of income and maximize its impacts at the producer level; (iii) accessibility via a road that is or will be passable all year round at the end of the project; (iv) existence of well-marked agricultural and marketing channels; and (v) existence of Professional Agricultural Organizations (PAOs) that are already established and active.

48. The implementation of this subcomponent will involve local communities and address multi-dimensional barriers including women's access and participation in rural markets. The implementation will begin with a study to inform the selection of market points for intervention. As part of the study, a gender assessment will seek to identify entry points in the intervention sites for women's economic empowerment and ensure their active and productive involvement in the value chain and in PAOs while addressing barriers related to time, poverty and limited access to resources.

49. The facilities will be basic but functional, tailored to the needs and adapted to the socioeconomic context. The facilities to be financed will focus on public infrastructure, including amenities such as sheds and trees for sun protection and natural cooling, and water points to accommodate for the occurrence of extreme heat events, solar energy lighting, and segregated toilets. They may include short-term storage facilities for agricultural products, which could put farmers in a better negotiating position with merchants. The storage facilities will also promote the safety of food products and enable commerce activities to continue during extreme heat events and in the eventuality of disruptions in the road network due to climate impacts. This will be accompanied by training in negotiation and financial skills.

50. This subcomponent will also support the development of small agricultural logistics centers (agricultural product grouping centers) to facilitate the collection, purchase and transfer of vegetables and other food crops to markets. The activities will therefore focus on the development and/or rehabilitation of grouping centers for food products. Solar energy will also be considered as a source to cover electricity needs. Storage sheds, conservation, and water supply will be included to guarantee the sanitary quality of horticultural products.

51. Finally, the project will set up an agricultural trade information system in each selected market to provide average daily prices for the main products to enable farmers to better discuss their selling prices. This will be done with the support of Office for the Marketing of Food Products (*Office de Commercialisation des Produits Vivriers*, OCPV) which is currently developing a price information system.

Subcomponent 2.2: Improvement of Pastoral Connectivity – Rehabilitation of Transhumance Corridors and Tracks (US$6.0 million from IDA)

52. The project aims to restore the conditions for orderly, peaceful and sustainable management of transhumance routes, incorporating climate resilient measures, both within and outside protected areas. Transhumance is a type of pastoralism characterized by the seasonal movement of people and their livestock. For several decades, northern Côte d'Ivoire has been marked by conflicts between farmers and herders which have become more frequent in recent years (more than 800 herder-farmer conflicts recorded between 2000 and 2021). These incidents are mainly related to crop damage caused by transhumance practices, both cross-border and internal. The subcomponent will facilitate access for herders and agro-pastoralists to agro-pastoral resources in (natural pastures, cultivated fodder, crop residues, water points) in protected areas with improved and peaceful contexts. The approach envisaged will be different inside and outside of classified forests as stakes are different, particularly with reference to inter-group relations.

53. The activities planned under this component include (i) rehabilitation of 900 km of transhumance corridors, generally from the entry points to the cattle borders, in continuity with the work in progress or carried out under projects financed by other partners; (ii) development of 65 transhumance trails within 36 classified forests spread over seven Forest Management Units (FMUs) for a total length of about 1,436 km.

54. Within classified forests, the scope will be to implement the management plan through the rehabilitation of transhumance trails. It would entail developing or rehabilitating transhumance trails[45] with fodder trees and small water points to channel the movement of animals and enhance resilience during extreme heat events. The works will include: (i) livestock channeling hedges; (ii) fodder plots; (iii) temporary night parks; (iv) temporary shelters for shepherds; as well as (v) water points. The works will integrate considerations to enhance resilience to climate change impacts such as the occurrence of extreme heat and flooding events.

55. Outside classified forests, this subcomponent aims to restore corridors or create alternative routes in case the rights-of-way are no longer available. Works would include the development of passage corridors marked with signs specific to the local context (painting on trees, planting, markers, plaques, etc.), 100 meters wide (but which could be reduced to 50 meters in areas of high agricultural pressure) and including staging areas (every 25-40 km) as well as various elements: water points, grazing areas, etc. The identification of routes will take into consideration flooding and extreme heat risks. These routes will lead to pastures, water points, or pastoral infrastructure (e.g., livestock markets, vaccination parks, holding pens, etc.) which are key to enhancing resilience to climate change impacts like extreme heat. In view of their complexity and their social dimensions, the studies will be entrusted to specialized non-governmental organizations (NGOs) active in this sector. To ensure that their points of view are taken into account, women will participate in delimitation committees as they are heavily involved in agricultural activities.

Subcomponent 2.3: Tree Planting and Environmental Education (US$5.2 million from IDA)

56. This subcomponent aims to modestly contribute to the Climate Change National Program intended to reforest 20 percent of the territory by 2030. The proposed activity is part of the climate change mitigation and adaptation policy. Finally, the program will support the environmental education

[45] Already provided for in the management plans of classified forests.

of the population in general and youth in particular. **Project activities will consist of afforestation along roads, schools, health centers, villages, water bodies, etc.** Works will include the following improvements, which will be limited to sites along the roads developed, rehabilitated or maintained under the project: (i) at least 1,000,000 trees (about 2,500 ha) planted in the 11 target regions; and (ii) at least 500 km of roads are forested with the planting of about 125,000 trees in an area equivalent to about 313 ha. The project will hire women for tree planting and will work in close collaboration with women-led grassroot movements to better implement adaptation measures, such as green jobs for women, job retention strategies. These women will also actively participate in the environmental education of the population.

Subcomponent 2.4: Strengthening Social Cohesion through Support to Social Services (US$37.5 million from IDA)

57. This subcomponent is intended to improve conditions in selected schools and health centers, as well as living conditions in towns located in non-communalized territories (i.e., without decentralized local administration). The project will contribute to strengthening social cohesion which is an essential factor of resilience given the various conflicts that threaten certain territories in the six border regions. Activities will prioritize non-communalized territories in the six border regions which include 49 sub-prefectures in total. The same activities will be carried out in at least 30 of the sub-prefectures of the five other regions, based on their population size.

58. Project activities will aim at improving facilities in all 410 schools and 70 health centers (e.g. toilets, water and handwashing points, electricity access, including solar panels when appropriate) of the 49 non-communalized territories of the six border regions. In all 49 small urban centers hosting sub-prefectures of the non-communalized territories of the six border regions, the project will provide public facilities including roads, drainage, and the development of leisure areas for young people. Priorities will be defined by beneficiaries, particularly through School and Hospital Management Committees (COGES - *Comité de Gestion*). The identification of interventions on roads and public spaces will be done in consultation with local public and private actors and local civil society (traditional leaders, religious leaders, etc.), with particular attention to the needs of women and youth. Implementation will strongly involve women, as they will be the main beneficiaries of the anticipated improvements in health centers and schools. The same activities will be carried out in at least 300 schools, 50 health centers and 30 small urban centers in the non-communalized territories of five other regions, based on their population size.

Subcomponent 2.5: Support to Rural Mobility (US$1.1 million from IDA)

59. This subcomponent will support the development of IMTs[46]. This will be done through (i) the development of a mobility strategy for rural areas in Northern Côte d'Ivoire, followed by (ii) a pilot operation in favor of women's groups linked to the anticipated rural markets and/or agricultural production collection points to be developed. The strategy will be essential for a better understanding of the current supply and demand in the transport of agricultural products. It will start with a gender informed assessment of mobility patterns and barriers - including an analysis of the availability, affordability and acceptability of transport modes and gender norms that impede their use by women - to define modalities for implementing a pilot operation targeting the specific needs of women farmers'

[46] Essentially tricycles, which are commonly used for transportation in this part of the country.

organizations. The subcomponent will also include a TA which will assess the ongoing use of drones to deliver medical essentials to health centres under emergency situations, and provide recommendations for improvement.

Component 3: Capacity Building and Support to the Institutional Framework and Sector Strategies (US$11.8 million equivalent, of which US$6.1 million equivalent from IDA and US$5.7 million from AIIB)

60. This component will enhance the institutional and strategic capacity of the sector. It will include support for technical services, works, goods, and human resource development. The impact of such support for institutional road sector capacity strengthening will need to be significant and long term to ensure sustainability of the PDO. The component will contribute to GCFR Pillar 3 strengthening resilience.

Subcomponent 3.1: Capacity Building (US$4.1 million of which US$2.1 from IDA and US$2.0 from AIIB)

61. This is a key program to support the reform of road maintenance management, which is mainly the business of SMEs. The detailed program will be developed after assessing the capacities of all actors (including public authorities, private enterprises and supervision engineers). This subcomponent will entail efforts to close technical skill gaps through training of technical staff (from both public and private sectors) in specific areas: climate change adaptation and resilience measures (including bio-engineering and nature-based solutions) and tools, OPBRC approach, management of construction companies, contracts management by public and private actors, bids preparation (including price calculations as well as works organization and execution of specific tasks for contractors,), practice of works supervision for the supervision engineers and AGEROUTE (including geotechnical, hydrology/hydraulics etc.). This will be done in conjunction with national structures such as INP-HB *(Institut National Polytechnique – Houphouet Boigny*), programs set up by the ministry in charge of SMEs, local vocational training centers and the two associations of public works companies (GI-BTP and G2-PME-BTP-CI).[47]

62. This subcomponent will work with companies to address barriers of entry, recruitment, retention, and promotion of women, with a focus on technical and decision-making roles. The project will organize and finance a paid internship program for female students in STEM tertiary education programs who will receive training in medium and high-skilled jobs. This will enable contractors to gradually build up a pool of women able to participate directly in works. Moreover, this paid internship will facilitate the school-to-job transition, foster women's entry in the sector and generate a cohort of 120 female role models for the new generation of Ivorian women.

63. In view of the innovative nature of some of the approaches envisaged (bioengineering and nature-based solutions, OPBRCs etc.), TA, including hands-on support during project implementation, will be essential to support the various actors. This assistance will focus on road maintenance programming, finalization of bidding documents (including definition of specific technical standards,), contracts management (including environmental and social aspects,), and works organization and implementation.

[47] GI-BTP (*Côte d'Ivoire* Public Works Inter-Employers' Group - *Groupement Ivoirien du Bâtiment et Travaux Publics*), which brings together the most important contractors established locally, received support from Millennium Challenge Account (MCA)) for the construction of a training center. Training curricula have already been developed, based on initial needs identified by contractors. G2PMEBTP-CI (*Côte d'Ivoire* Public Works Small and Medium Size Enterprises Inter-Employers' Group - *Groupement Patronal des Petites et Moyennes Entreprises du Bâtiment et des Travaux Publics en Côte d'Ivoire*) groups local SMEs active in the public works sector (102 members as of June 2022).

Subcomponent 3.2: Support to Road Sector Management (US$4.6 million of which US$2.4 million from IDA and US$2.2 million from AIIB)

64. The subcomponent aims to improve the overall management of the road sector to sustain and increase efficiency and improve the ability to respond to evolving connectivity needs and challenges. It includes a set of activities to be carried out within the project, including: (i) road network planning and investment, including the improvement of the existing Road Asset Management System (RAMS) at the national level (with climate change tools/indicators); (ii) formulation of a practical strategy to consolidate and manage rural roads; (iii) development of a road maintenance strategy; and (iv) preparation of a road sector climate change action plan. A provision is also made to finance preparation studies for future projects.

Subcomponent 3.3: Support to Road Safety in Rural Areas (US$1.4 million of which US$0.7 million from IDA and US$0.7 million from AIIB)

65. Activities will mainly focus on awareness-raising actions aimed at two main targets: (i) strengthening the knowledge, skills, and practices of communities and pupils through inclusion of road safety in the school curriculum; and (ii) training road safety inspectors in the practice of audits, including on unpaved roads. Attention will be paid to road safety on worksites, which can be analysed and dealt with within a global framework of occupational health and safety measures, including the establishment of accident monitoring tools.

Subcomponent 3.4: Support for the Climate Agenda (US$1.7 million of which US$0.9 million from IDA and US$0.8 million from AIIB)

66. This follows government's commitments to combat desertification at COP15 held in Abidjan from May 9 -20, 2022. It will include the rehabilitation and construction of additional meteorological facilities in the 11 regions.

Component 4: Support to Project Management (US$34.2 million equivalent from IDA)

67. This component will contribute to GCRF Pillar 4 Strengthening Policies, Institutions and Investments for Rebuilding Better.

Subcomponent 4.1: Technical Assistance to Project Coordination (US$14.3 million)

68. This subcomponent will finance: (a) TA to the Project Coordination Unit (PCU) for project implementation including: (i) citizen engagement including communication activities; and (ii) management of a Grievances Redress Mechanism including NGOs specialized in the prevention and management of Sexual Exploitation and Abuse (SEA) and sexual harassment (SH) risks; as well as (b) preparation and implementation of the resettlement action plan for the project.

Subcomponent 4.2: Monitoring and Evaluation, Technical Audits (US$4.1 million)

69. This subcomponent will finance (i) monitoring and evaluation (M&E) surveys and studies (baseline, mid-term review, completion report, and impact evaluation); (ii) external financial, technical,

environmental and social audits; and (iii) a Third-Party Monitoring (TPM) NGO which will perform the global monitoring of project activities and provide independent information on social and security risks associated to the project. Technical audits will be systematically conducted throughout works, and recommendations implemented progressively. There will be at least one annual audit for maintenance works and two for development/rehabilitation works. These audits will also cover occupational health and safety aspects.

Subcomponent 4.3: Contribution to Project Management (US$15.8 million)

70. This subcomponent will finance project management related costs not covered by counterpart funding, including: (i) salaries and travel expenses of the staff of the PCU and associated implementing agencies; (ii) public information; and (iii) operating costs and equipment of the PCU, including the Decentralized Unit.

Component 5: Contingent Emergency Response Component (CERC) (US$0.00 million)

71. This component will allow for the rapid reallocation of World Bank project proceeds in the event of a natural or man-made disaster or crisis that has caused or is likely to imminently cause a major adverse economic and/or social impact. To trigger this component, the GoCI would need to provide a statement of fact justifying the request for activation of the use of emergency funding. To allocate funds to this component, the GoCI will request the World Bank to re-allocate funds to support its response. If the World Bank agrees with the determination of the disaster and associated response needs, this component would draw resources from the unallocated World Bank expenditures of the other project components to cover emergency response and recovery costs. This component could also be used to channel additional funds should they become available as a result of an emergency. Disbursements would be made against a positive list of critical goods or the procurement of works, and consultant services required to support the immediate response and recovery needs. A Project Implementation Manual (PIM) will apply to this component, which will be part of the PIM, detailing financial management (FM), procurement, safeguards, and other necessary implementation arrangements following World Bank guidelines and regulations.

C. Project Cost and Financing

72. The total project cost is estimated to be US$571.2 million equivalent, of which US$300 million equivalent from IDA Scale-up Window (SUW), US$200 million from Asian Infrastructure Investment Bank (AIIB) and US$71.2 million from counterpart financing. Under the joint co-financing mechanism, the World Bank and AIIB will co-finance the project activities proportionally, with separate financing agreement with the government of Côte d'Ivoire, and a co-lender agreement between the two financiers which defines the scope and collaboration mechanism associated with the co-financing.

Table 1: Project Cost and Financing Sources (indicative, in million US$)

Components	Project Costs	Financing Sources		
		IDA	AIIB	Counterpart
Component 1: Inclusive and Resilient Rural Connectivity Infrastructure	**449.1**	**196.2**	**181.7**	**71.2**
1.1 Rehabilitation and Upgrading of Strategic Roads to Climate Resilient Standards	294.8	153.1	141.7	0.0
a) Rehabilitation of unpaved rural roads	*134.0*	*69.6*	*64.4*	*0.0*
b) Upgrading of the Dianra-Bouandougou-Bouake road	*160.8*	*83.5*	*77.3*	*0.0*
1.2 Periodic and Routine Climate-Resilient Maintenance of the Strategic Network	127.5	29.2	27.1	71.2
1.3 Spot Climate-resilient Improvement of Non-Strategic Network	26.8	13.9	12.9	0.0
Component 2: Rural Socio-economic Infrastructure	**76.0**	**63.5**	**12.5**	**0.0**
2.1 Consolidation of the Agricultural Logistics Chain	26.2	13.7	12.5	0.0
2.2 Improvement of Pastoral Connectivity – Rehabilitation of Transhumance Corridors/Tracks	6.0	6.0	0.0	0.0
2.3 Tree Planting and Environmental Education	5.2	5.2	0.0	0.0
2.4 Strengthening Social Cohesion through Support to Social Services	37.5	37.5	0.0	0.0
2.5 Support to Rural Mobility	1.1	1.1	0.0	0.0
Component 3: Capacity Building and Support Institutional Framework and Sector Strategies	**11.8**	**6.1**	**5.7**	**0.0**
3.1 Capacity Building	4.1	2.2	2.0	0.0
3.2 Support to Road Sector Management	4.6	2.4	2.2	0.0
3.3 Support to Road Safety in Rural Areas	1.4	0.7	0.7	0.0
3.4 Support for the Climate Agenda	1.7	0.9	0.8	0.0
Component 4: Support to Project Management	**34.2**	**34.2**	**0.0**	**0.0**
4.1 Technical Assistance to Project Coordination	14.3	14.3	0.0	0.0
4.2 Monitoring and Evaluation, Technical Audits	4.1	4.1	0.0	0.0
4.3 Contribution to Project Management	15.8	15.8	0.0	0.0
Component 5: CERC	**0.0**	**0.0**	**0.0**	**0.0**
TOTAL PROJECT COST	**571.2**	**300.0**	**200.0**	**71.2**

D. Project Beneficiaries

73. The project is expected to directly benefit a minimum of 3.67 million people in the targeted rural areas living within five kilometers of the strategic roads to be improved or maintained. Women will benefit from the improved socio-economic infrastructure and facilities. The project will also benefit people living beyond the five-kilometer buffer zone, with improvements of non-strategic roads. These indirect beneficiaries are users of social services and markets located in the entire project impact area. The project will benefit primary school students, especially in non-communalized territories. In a nutshell, "nobody will be left behind". The main anticipated benefits of the project include: (i) reductions in transport time and variability of time along the road sections; (ii) the opening of economic growth poles; and (iii) better access to health services resulting from reduced travel time for staff living in towns to join their duty stations and better access of ambulances to rural health centers for the transfer of patients to higher-level hospitals. In the long term, the populations of the selected areas will benefit from reduced economic isolation, the expansion of regional markets, and better access to national markets. Improved connectivity will also benefit firms and smaller producers in the regions who will gain better access to

production inputs (thus becoming more productive and competitive), as well as regional and global markets for selling their goods.

74. Most of the beneficiaries are farmers who will benefit from better road conditions and rural market facilities for selling agricultural products. By reducing transport costs, shared economic prosperity can be boosted in the agricultural sector by: (i) increasing the producer's economic surplus; (ii) reducing income uncertainties due to constraints in product evacuation; and (iii) enabling productivity growth and exploitation of previously untapped agricultural potential. Other beneficiaries are households engaged in commercial farming, particularly in the production of cashews and cotton, which are the main cash crops in this part of the country. A survey carried out across Côte d'Ivoire revealed that purchase prices were accepted in properly served areas that were more easily accessible to collection vehicles.

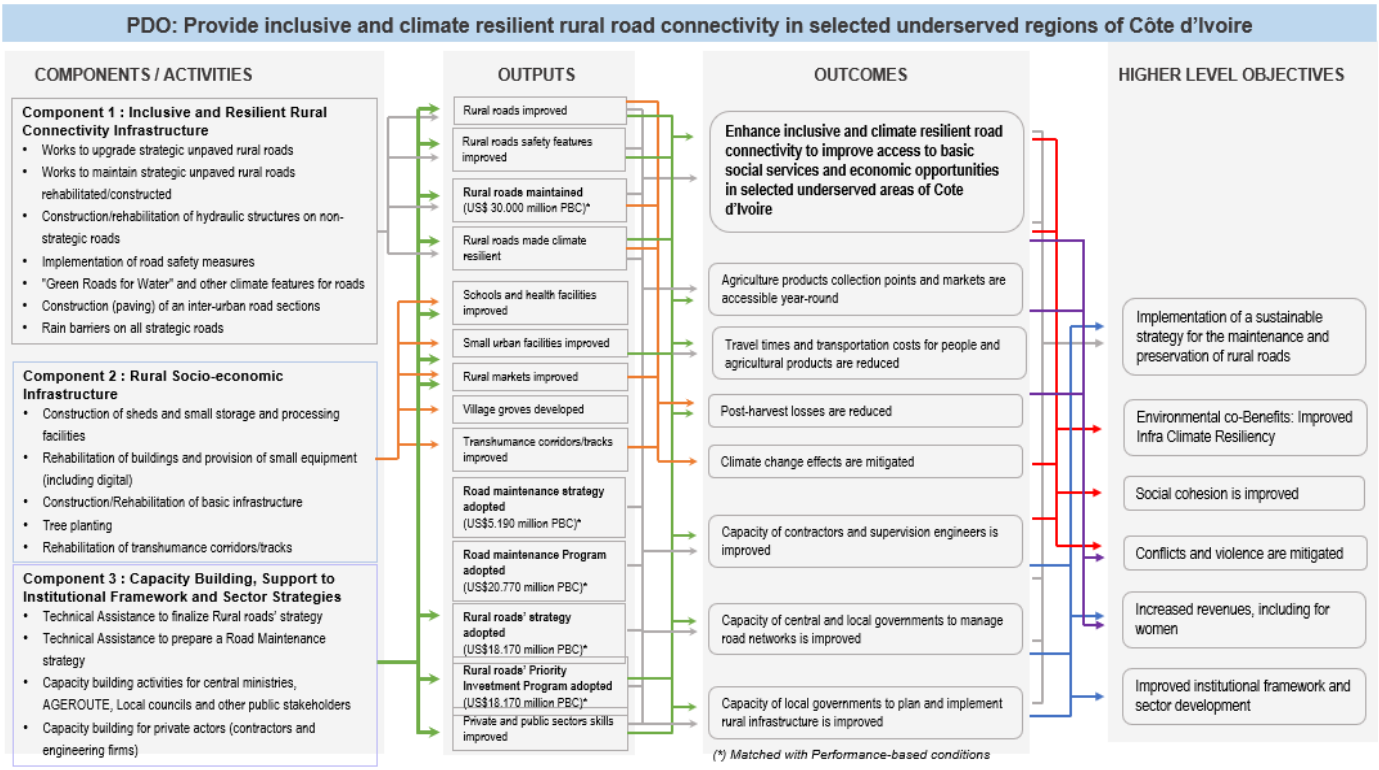
75. Key road sector stakeholders will also benefit from project interventions. Benefits include strengthening the capacity of institutions such as: (i) the Ministry in charge of roads, as well as institutions/offices responsible for road management (AGEROUTE), road maintenance financing (FER) and road safety (*Office de la Sécurité Routière* - OSER); (ii) regional councils who implement local activities, including rural infrastructure; and (iii) private sector, including road contractors and engineering firms.

76. Women - especially secondary school female students and pregnant women - will benefit from improved access to schools and health centers which will impact attendance. Upgraded roads will improve women's mobility as travel time and costs will be reduced. Coupled with small storage facilities which will reduce the need to carry heavy goods, female agricultural entrepreneurs' productivity will also increase. Young women will have access to better jobs thanks to the internships, and female staff in AGEROUTE will benefit from a review of gender-related barriers on retention and promotion practices, coaching sessions, and the implementation of a workplace SH protocol. Rural women will benefit from green jobs involving the planting of trees while becoming educational agents to fight climate change.

E. Results Chain

77. The proposed theory of change (ToC) that creates a direct link between the financed activities, the outputs, and outcomes is described in the figure below. The key assumptions for the ToC include: (i) institutional setups for implementing relevant activities are in place; (ii) qualified contractors for road works and consulting services are selected through competitive bidding; (iii) policies/implementation plans are agreed among stakeholders and approved by government; and (iv) an M&E mechanism is in place with regular data collection.

Figure 5: Theory of Change



F. Performance-Based Conditions (PBCs)

78. To achieve the PDO, the project combines rural road works, TA and capacity-building financed under the standard Investment Project Financing (IPF) World Bank financing instrument. In addition, Performance-Based Conditions (PBCs) are used to incentivize the attainment of intended intermediary results. The PBC modality is used to ensure that works, TA and capacity investments generate optimal and sustainable benefits, and lead to intended outcomes by making part of the project financing conditional on the achievement of measurable intermediary results. The total value of disbursement conditions is set at US$190 million equivalent, which represents 38 percent of the total World Bank and AIIB financing (US$500 million equivalent). For the IDA contribution, the total is US$98.650 million equivalent, representing about 32.9 percent of the total IDA financing (US$300 million equivalent). The validation of PBC achievement needs to be acknowledged by the three parties (World Bank, AIIB and the government of Côte D'Ivoire) through an agreed validation protocol. The PBCs are as follows (more details in Annex 2):

a) **PBCs 1 and 2 on "Rural Road's Strategy Adopted" and "Rural Road's Pluriannual Priority Investment Program Adopted"**: The achievement of targets will be verified in 2024 and 2025. Disbursements will be made with the achievement of the following conditions: (i) preparation and adoption of a rural road's strategy (2024); and (ii) preparation and adoption of a pluriannual investment program (2025) based on the adopted strategy. The Disbursement Value is set at a total of US$70 million equivalent (US$35 million equivalent for each condition, of which for each condition US$18.17 million equivalent under IDA) which represents around 52 percent of the anticipated expenditure for rural roads development under the project (Subcomponent 1.1a).

b) **PBCs 3, 4 and 5 on "Road Maintenance Strategy Adopted", "Road Maintenance Program Adopted" and "Contract for the Maintenance of the Dianra-Bouandougou-Bouake Road**

Signed": These PBCs are introduced to support GoCI's aims to finalize, adopt and implement a relevant road maintenance strategy. The achievement of targets will be verified each year and disbursements made with the achievement of the following conditions: (i) preparation and adoption of a road maintenance strategy (2024); (ii) preparation and adoption of a multi-year maintenance program based on the adopted strategy and available resources (2025); and (iii) signing of a maintenance contract for the paved roads under the project in line with the maintenance strategy adopted (2026)**.** The Disbursement Conditions Value is set at a total of US$90 million equivalent (of which US$46.73 million equivalent from IDA), which represents around 56 percent of expected expenditures for paving the Dianra-Bouandougou-Bouake road under the project (Subcomponent 1.1b – road upgrading).

c) **PBC 6 on Rural Roads Maintained under the project with FER's Financing:** This PBC is meant to support GoCI's aim to effectively implement routine maintenance, financed by FER. The length (total) of strategic roads timely maintained each year on FER financing, starting 2025, will be verified against targets and disbursements made with the achievement of conditions. The Performance Conditions Value is set at a total of US$30 million equivalent (of which US$15.58 million equivalent from IDA), which represents around 22.8 percent of the expected expenditure for rural roads rehabilitation under the project (Subcomponent 1.1a). Performance Condition, which allows flexibility of disbursement if the targets have been partially met. If targets have not been fully met (i.e., downward scalability), the disbursement will be made in proportion to the degree of achievement of the result linked to the condition (with the formula US$2,000 per kilometer of road effectively maintained, of which US$1,040 IDA). The credit amount of the unachieved part of the condition in the envisioned timeframe will be cancelled

G. Rationale for World Bank Involvement and Role of Partners

79. "Public goods." The main rationale for public sector financing is the nature of interventions that constitute "public goods." Basic road access to social and economic opportunities is a public function. Very low traffic volumes on rural roads, the weak local economy and the fragile environment do not justify private sector involvement in rural roads and the rural agriculture logistics chain. In addition, public investment in road infrastructure is a way for the government to play a key role in the economic development of the northern part of the country by enhancing access to markets and social services, social cohesion, and rural territorial development.

80. This project will also build on the World Bank's ongoing multisectoral engagement in Northern Côte d'Ivoire and solid analytical work (P174829). The World Bank is planning to support inclusive development to enhance resilience to fragility and mitigate conflict/violence spillovers from the Sahel. This will be done through several projects with interventions on physical and digital connectivity, social cohesion, electricity, water and secondary cities. The project therefore complements a series of interventions including inter alia the Gulf of Guinea Social Cohesion project (P175043), the Côte d'Ivoire National Electricity Digitalization and Access in Lagging Regions Operation (P176776), the Côte d'Ivoire e-agriculture project (P160418) and the Côte d'Ivoire Sustainable and Inclusive Northern Cities Project (P177062). A key value addition of the World Bank will be in integrating the expertise of different sectors and thematic areas to develop a comprehensive program to maximize the development impact in this part of the country. The proposed project is part of a broader framework of World Bank support to the

Northern regions to better balance its spatial footprint. It will also build and extend ongoing efforts[48] in the agriculture sector (e-Agriculture and cashew projects).

81. The World Bank has a longstanding track record of experience and expertise in preparing rural roads projects in the region and globally, as well as collaboration with other development partners. The value added of the World Bank's support includes sharing implementation experience from similar World Bank-financed projects; expertise and understanding of potential linkages with other sectors (education, health, agriculture); and ensuring the application of technically robust and resilient engineering design standards, reliable procurement and FM procedures, environmental and social safeguards, proper quality control and supervision, and efficient M&E systems. It has a track record of providing support to the government in ensuring that its investments yield the maximum benefits for the climate, women, and vulnerable populations. The World Bank also has collaborated closely with the development partners to bring a coordinated approach and leverage financing for transport development. Its value added is its ability to convene national agencies, implementing agencies, and development partners around a model for engaging in the sustainable development of the rural transport sector

H. Lessons Learned and Reflected in Project Design

82. The project is informed by the ASA on Rural Connectivity in Northern Côte d'Ivoire (P174829) which proposed a new approach to enhance human capital and economic development through inclusive, equitable and sustainable connectivity. The key recommendations reflected in the project design include: (i) ensuring greater inclusivity and equity by guaranteeing a minimum service level for the greatest number of people; (ii) improving access to basic socio-economic infrastructures and urban-rural linkages; (iii) enforcing the financing and maintenance of road assets to ensure the quality of roads throughout their designed lifespan; and (iv) using road development projects to catalyze the development of agricultural logistics, social services and community resilience.

83. This ASA concluded that rural connectivity is essential to improve rural accessibility and reduce the rural-urban divide. Improved rural connectivity: (i) corrects the significant disparities between regions that are factors of fragility and internal tensions; (ii) contributes to improved resilience against security hazards (bridging physical and digital gaps); (iii) enhances socio-economic conditions in rural areas, especially as they relate to education and health access; and (iv) increases access to markets for agricultural products. Indeed, improved physical accessibility is critical for conflict and violence prevention and would be a key contributor to social resilience in the northern regions. It facilitates the movement of defense forces fighting armed groups. It also helps build social cohesion through the provision of basic services. Finally, it breaks isolation, which is the main element of feeling insecure. Better road conditions lead to the improved and more affordable transport of crops, especially in this part of the country where distances to markets are much longer than in other regions given the low density of urban centers. Also, better physical connectivity is essential for many categories of rural dwellers: (i) for women's access to care during the critical perinatal and ante-natal periods; (ii) for

[48] These include the Cashew Value Chains Competitiveness Project (P158810) which covers all the 11 regions, the Competitive Value Chains for Jobs and Economic Transformation Project (P172425) which support investments in the Tchologo and Poro regions, and the Côte d'Ivoire E-Agriculture Project (P160418) with roads investments in the Poro, Bagoue and Bounkani regions.

healthcare staff who usually live in cities; (iii) for patients needing to be transferred to higher-level hospitals; and (iv) for the mobility of teachers, hence resulting in a better coverage of schools in rural zones. Better connectivity will also facilitate the distribution of drugs and other supplies to health centers in remote areas.

84. At the same time, it is essential to help the smallest cities play a better role in revitalizing territories and strengthening the rural-urban interface; this can be done by providing basic services and facilities. The northern part of the country is characterized by a low density of cities that would otherwise present non-agricultural employment opportunities. The distances rural residents need to travel to reach such centers are relatively large. This results in weak local economies largely dominated by activities in the primary sector (agriculture and livestock) with limited potential in terms of the quantity and diversification of jobs. While all these cities have an important administrative function, in general, their level of basic services does not adequately enable them to play a role in structuring local economies. For populations living in surrounding rural areas, for example, these cities do not provide well paid jobs but do play a commercial role as places for sale or transit of agricultural goods and manufactured products.

85. Learning from recent operational experience in FCV countries, the project adopts a multisectoral approach to promote inclusion and growth with the involvement of local communities and vulnerable groups. World Bank experience with recent projects in Sub-Saharan Africa[49] demonstrates that: (i) a spatially driven multisectoral approach (i.e., that combine investments in infrastructure, basic services, economic development, governance, community engagement, and security) is key to achieving inclusive development in poor and underserved regions; (ii) community involvement in the selection of project activities fosters social cohesion and ensures greater ownership and sustainability of investments; and (iii) it is critical that women, youth, and minorities, actively participate in the decision-making process.

86. As OPBRCs are relatively new to the rural roads context in Côte d'Ivoire, based on the experience of other African countries, the project will start with a pilot to prepare the government and private sector for an eventual scale up. In contexts where OPBRCs are new, the recommendation is not to impose a great risk on contractors. It is therefore better to limit works to maintenance and avoid heavy reconstruction or rehabilitation works. This allows the contract to be sufficiently attractive to contractors over time beyond the initial period. From a technical perspective, it is recommended to start with a pilot project, framed by a set of measures such as: (a) a streamlined bidding process, including an in-depth information session for contractors and the use of prequalification methods; and (b) the setup of a conflict management mechanism; regular technical sessions and capacity building support for the main stakeholders.

87. Furthermore, the project incorporates lessons learned from road projects in Côte d'Ivoire. Recent or ongoing road projects highlight several factors: (i) the absorption capacity of the market is relatively high given the volume of major works in progress over the past several years; (ii) attention must still be paid to the capacity of local actors, public or private; (iii) technical issues should be clarified early on to avoid substantial modifications and/or challenges at the project implementation stage; and (iv) special attention should be paid to the capacity of public entities in contract management.

[49] Côte d'Ivoire - Emergency Infrastructure Renewal Project Additional Financing (P124715).

III. IMPLEMENTATION ARRANGEMENTS

A. Institutional and Implementation Arrangements

88. The institutional arrangements for the project (see details in Annex 1) include: (i) oversight and orientation by an Inter-Ministerial Steering Committee (ISC); (ii) overall coordination of project activities and partners by the Ministry of Infrastructure and Road Maintenance (*Ministère de l'Equipement et de l'Entretien Routier*, MEER) through a PCU; (iii) advice on planning and monitoring of project implementation activities by Regional Consultative Committees (RCC); and (iv) technical execution of project activities vested with strategic public entities, Specialized Implementation Agencies (SIAs). The PIM, to be prepared by MEER and finalized by project effectiveness, will detail all coordination, management, implementation, M&E, and reporting functions.

89. **The main functions and responsibilities of the ISC** are to: (i) advise the project on strategic directions and supporting activities; (ii) approve the Annual Work Plan and Budget (AWPB); (iii) ensure effective collaboration and cooperation between all key stakeholders; and (iv) review the PCU's Implementation Progress Reports, assess the effectiveness of ongoing activities, and advise on adjustments needed in the AWPB. The ISC will be chaired by the Minister of MEER or his/her designated representative. It will be comprised of representatives from: (a) ministries in charge of Budget, Regional Development, Finance, Land Tenure, Decentralization, Rural development, Environment, Hydraulics, Education, Health, and Livestock; (b) the Assembly of regional councils and Districts of Côte d'Ivoire (*Assemblée des Regions et Districts de Côte d'Ivoire* – ARDCI). The committee will include representatives from cashew nuts organizations, so that they may contribute to good governance and voice their concerns as needed.

90. **The implementation of the proposed project would be led by the existing PCU in charge of World Bank-funded transport projects (known as CC-PRICI -** *Cellule de Coordination des Projets d'Infrastructures en Côte d'Ivoire***), which reports to MEER.** CC-PRICI is currently satisfactorily managing the Greater Abidjan Port City Integration Project (*Projet d'Appui à la Compétitivité du Grand Abidjan,* PACOGA) (P159697), Urban Water Supply Project (P156739), and Infrastructure Project for Urban Development and Competitiveness of Secondary Urban Areas (*Projet d'Infrastructures pour le Développement Urbain et la Compétitivité dDes Agglomérations Secondaires*, PIDUCAS) (P151324). PIDUCAS will close in July 2023. The PCU, with the support of dedicated personnel and SIAs, will oversee planning and budgeting of project activities and execute the approved AWPB. It will also oversee special arrangements with SIAs, technical supervision and quality control, gender inclusion, environmental and social safeguards (particularly resettlement), and M&E. The project will maintain close coordination with the regional councils of the targeted project areas to ensure local ownership and support of project activities. As for the other projects, a management contract will be signed between MEER and CC-PRICI.

91. The project coordinator will be assisted in day-to-day project operations by a deputy project coordinator, who will be the technical operation's manager. The deputy project coordinator will be assisted by technical focal units anchored in each sector ministry involved in project implementation. Technical specialist and other personnel from the relevant ministry will be appointed to manage the preparation, implementation, and reporting of activities falling under its mandate. The PCU is fully staffed and includes, in addition to the coordinator, a deputy-coordinator, a procurement specialist, an M&E specialist, an FM specialist, an environmental safeguards specialist, a social safeguards specialist, and

accountants. For the new project, the PCU will be strengthened with additional dedicated staff, including, a civil engineer to supervise other infrastructure works other than roads, safeguards specialists and a social development specialist to address gender issues and citizen engagement, including the management of the Grievance Redress Mechanism (GRM) with gender-based violence considerations. A security specialist will be hired to monitor the security situation, liaising with partners (such as UNDSS) to access recent security data and provide advice for project implementation. The security specialist will also provide cross support to other projects under implementation in the six border regions. Considering the geographic distance from Abidjan, a decentralized entity of the PCU headed by the deputy-coordinator will be based in the Northern regions to facilitate day-to-day operations and close follow-up of the numerous project activities.

92. Regional Consultative Committees (RCC). RCCs will be established in the target regions, presided over by the Regional Divisional Officer (Préfet) and the president of the regional council as vice-president. They will include representatives of the ministries represented at the Inter-Ministerial Steering Committee (ISC) level, local civil society (key traditional rulers, local opinion leaders) and the local private sector (cashew and cotton operators, transport operators etc.). RCCs will be responsible of monitoring of implementation of project activities.

93. Regional councils. Regional councils will be in charge of activities within their mandate under the decentralization laws (i.e., rural markets and agricultural produce collection points, and investments in schools, health centers and small cities). The regional councils will also support AGEROUTE on activities related to non-strategic roads). This will help reduce the number of direct stakeholders (ministries). The division of responsibility between regional councils and the central government will be defined by performance contracts. Within each regional council, a Regional Technical Unit (RTU) will be created to oversee the overall coordination of project activities on behalf of the Regional Council. It will prepare the technical documentation for investments under the Regional Council's mandate and monitor the proper implementation of the Regional Council's activities for which it is responsible, including reporting. The RTU will consist of dedicated staff, drawn from the Regional Council staff: a coordinator, a staff in charge of procurement, a staff in charge of technical matters, a staff officer in charge of Community Development and social matters.

94. Specialized Implementation Agencies (SIAs). Regional councils and government agencies or ministries will implement project activities that fall within their respective institutional mandate. Road works will be implemented by the Road Agency (AGEROUTE). Other implementing agencies include Forestry Development Society (*Société de Developpement des Forêts*, SODEFOR) for activities in classified forests, National Agency for Universal Service of Telecommunications/ICT (*Agence Nationale du Service Universel des Télécommunications/TIC*, ANSUT) for optical fiber extension, and Airports, aeronautics and meteorology operation and development company (*Société d'Exploitation de Développement Aéroportuaire Aéronautique et Météorologique*, SODEXAM) for activities related to meteorology. CC-PRICI will sign delegated management contracts with all identified SIAs. The contracts will define the roles and responsibilities for the agencies involved in project implementation.

95. Beneficiary communities. As part of citizen engagement, beneficiary communities will be associated with the project at different stages. At the identification and preparation stages, they will be consulted for identification of neighbourhood activities (i.e., rural markets and agricultural produce collection points, schools and health centers, pastoral connectivity, and community forests). At the

implementation level, follow-up committees will be established for each facility. For road works, a community monitoring mechanism will be established to provide feedback to the RCC. Mechanisms for citizen engagement will be developed.

96. Special security arrangements. As a result of the situation in neighbouring countries, the security situation in Northern Côte d'Ivoire is a serious concern and could pose a key challenge for project implementation in some regions. Even though no new attack has been reported since 2021, the security situation in Côte d'Ivoire remains fragile. While Defense and Security Forces (*Forces de Défense et de Sécurité*, FDS) are the main targets of these attacks, civilian casualties have also been reported as collateral damage. Under these circumstances, special security measures are envisaged to ensure entities can confidently deploy staff in the field for construction, supervision or monitoring of different activities to be carried out, including construction of infrastructure. The government has responded to the insecurity and terrorist threats by adopting security measures and reinforcing the presence of military personnel. In July 2019, the government launched "*Operation Frontiere Etanche*" along its northern borders, as part of its fight against jihadist activities. As indicated in the security risk assessment[50], the upsurge in terrorist actions is due to the active conflict in Mali and Burkina Faso that is rapidly spreading and is exacerbated by political instability. Several risks have been identified in the security risk assessment, including: (i) kidnapping, killings, and targeted attacks against contractors, workers, PCU personnel, and project beneficiaries; (ii) theft of construction material, food and fuel brought by contractors and workers; (iii) attacks against infrastructure built by the project; (iv) enhanced risks of gender-based violence against project beneficiaries and populations living in neighbouring villages; (v) social unrest; and (vi) car accidents as a result of project activities that could lead to popular mobilization.

Table 2: Level of risks for each district in project area[51]

Intensity of risks	Denguele	Savanes	Zanzan
Low	Odienne, Kaniasso, Samatiguila, Gbeleban, Madinani	Korhogo, Boundiali, Ferkessedougou	Bouna
Moderate	Minignan	Ouangolodougou, Tengrela	
High		Kafolo	Tehini, Doropo

97. Appropriate measures have been identified and adopted to mitigate the impact of security risks for the implementation of the project. This includes: (i) an early alert plan of security risks to the local residents; (ii) a strong citizen engagement plan to be prepared prior to the start of the works); and (iii) preventive measures to be included in the works contracts to protect physical infrastructure and mitigate risk exposure for workers, including the reinforcement of technical installations and the provision of a minimum of the security measures. In addition, it was agreed with the government that in areas where security risks are assessed as moderate or high, special arrangements could be considered to protect works sites. In such cases, a permanent Special Security Detachment (*Détachement de Sécurité des Travaux* - DST) [52] The deployment of this DST will follow the provisions spelled out in the Financing Agreement on Use of Military and Security Actors. The deployment of this DST will be fully funded by the GoCI's budget. Security management measures will remain adaptative and flexible to respond to the

[50] Conducted as part of project preparation.
[51] Source: Security risks assessment, May 2022.
[52] The measures are based on lessons learned from the CEMAC TTF Project (P079736), in which such arrangements were made to enable works in the Far-North Region, threatened by Boko Haram.

changing and volatile security environment. If security issues escalate or recede, the security management plan will be revisited by the World Bank and the Recipient. All military personnel involved in related activities will undergo training in international humanitarian law and human rights, civilian-military engagement as well as gender-based violence issues and awareness, managed and financed through the project.

B. Results Monitoring and Evaluation Arrangements

98. M&E system. The project will have a comprehensive M&E system to provide good quality data enabling GoCI and the World Bank to monitor implementation, assess progress toward the PDO, and make necessary adjustments. The M&E system will serve as a day-to-day management tool to guide project implementation and as a mechanism for the periodic assessment of project performance to gauge impact. It will collect quantitative data linked to the Results Framework performance indicators and capture qualitative information on project impacts that cannot be fully assessed with quantitative methods. The M&E system will support project supervision by ensuring that baseline and follow-up survey data on key performance indicators are available and regularly updated.

99. Impact evaluation. The project will conduct an impact evaluation using rigorous research methods to identify the changes in livelihoods and welfare on account of the project. This activity will capture lessons learnt from project implementation and ensure that evidence from impact evaluations of similar operations elsewhere in the region inform project implementation. The detailed scope of work on impact evaluation will be defined in the first year of implementation with GoCI and with TA from the Development Impact Evaluation Department of the World Bank Group. The impact evaluation will benefit from the phased implementation of access road and rural community infrastructure improvements and will aim to better understand the differential impacts on household behaviors and welfare that derive from spatially coordinated investments in road accessibility, schools, health facilities, markets, and agricultural centers.

100. To systematically enhance M&E as well as supervision, the project will use tools and methods of the World Bank Geo-Enabling initiative for Monitoring and Supervision (GEMS). GEMS will enhance the transparency and accuracy of M&E, increase accountability of TPM, and provide platforms for remote supervision, real-time risk monitoring, and portfolio mapping for coordination across projects and partners.

101. The M&E section of the PIM provides details related to the results framework, including the definitions of indicators, the methodology and the instruments to be used for data collection, the institutional arrangements for M&E functions (identification of actors and definition of their respective responsibilities), the GRM, and the mechanism for disseminating information. The Results Framework includes the complete list of indicators for each project component, specifies the frequency and methodology for collecting data on each indicator, and identifies the entity responsible for data collection. Whenever possible, the M&E system will explicitly disaggregate results by gender. The PIM and associated M&E manual will provide details on the organizational and technical conformation of M&E procedures to satisfy World Bank requirements.

C. Sustainability

102. Sustainability considerations are built into the design of project components. The project will support the reform of rural road's management and financing: (i) programming of road maintenance including procedures to link commitments with available resources; (ii) FER's governance including internal and external technical and financial audits; (iii) the introduction of long-term OPBRCs including design-build and maintenance activities; as well as (iv) a contribution on a declining basis to road maintenance financing to reduce the financial burden until FER's financial health and resources increase.

103. In addition, under Component 3 the project will strengthen the capacity of public institutions through staff training, more efficient organization, and the provision of adequate technical and managerial skills. It will build the capacity of private entities to pursue their ventures beyond the life of the project. The enhanced capacity of local civil works contractors and engineers will make them better placed to continue the works after the project ends. The relatively long duration of the project (six years) is also an important parameter, insofar as it allows reforms to be established and capacities to be built.

104. Finally, the proposed project was prepared through a participatory process that included close consultations with a full range of partners and stakeholders (government, regional councils, private sector and civil society). This consultative process enabled the project team to draw on different areas of expertise, consider all technical and institutional views, and build stakeholder ownership (prerequisites for sustainability). This process will be continued during implementation to maintain the shared vision and collaborative relationships forged during preparation.

IV. PROJECT APPRAISAL SUMMARY

A. Technical and Economic Analysis

Technical Analysis

105. The project design was informed by recent analytical work conducted by the World Bank and responded to the government's need to be more strategic about investments in the road sector. A recent study conducted by the World Bank, *Roads For Inclusive And Resilient Access To Basic Socio-Economic Facilities In Northern Côte d'Ivoire* - a *new approach for enhancing human capital and economic development through inclusive, equitable and sustainable connectivity (2021),* shows that in the 11 regions that make up the north of the country, improved and more inclusive rural connectivity can have a positive impact on human capital development, as well as on the resilience of populations to climate change, poverty, and conflicts both internal and from the Sahel (Burkina Faso and Mali).

106. Despite significant progress in recent years, the existing approach to rural roads management in Côte d'Ivoire is challenging to sustain from both a financial and technical point of view and has technical and organizational shortcomings. There was a need to develop and implement a new strategy and prioritization framework to improve access to basic socio-economic facilities (schools, health centers, and markets). Given the scale of rural connectivity needs, the project design seeks to use the criteria for determining investment priorities in the sector developed as part of the study to ensure more inclusive development.

107. The project is essentially designed for greater inclusivity and equity by guaranteeing a minimum level of service for the greatest number of people. This means: (i) ensuring the maximum of the population has access to an all-weather road located within five kilometers (km) of their homes; (ii) ensuring 100 percent of health and school facilities are accessible via an all-weather road; and (iii) eliminating the maximum of existing cut-off (impassable) points. Attaining these outcomes requires improving the programming process, systematizing the maintenance and protection of assets, and revising the institutional framework.

108. The level of accessibility in the 11 regions of the North was measured using the MRAI, which considers a wider buffer zone (5 km). This is a variant of the Rural Access Index (RAI), which corrects its shortcomings[53] by considering the real dimensions of the social sectors (education and health)[54] from a more economic perspective. The advantages of this modified RAI are numerous: (i) it limits over-investment in the tertiary level network for a reduced number of beneficiaries and favors the primary and secondary networks, which have a more economic dimension; (ii) many populations are still located beyond 5 km from a road that is passable in all seasons; and (iii) for small-scale farmers and people travelling to schools and health centers, the level of road comfort is not generally a crucial issue for the five-kilometer buffer zone; their needs (in terms of means of transport) are limited to the absence of traffic disruption points, and the existence of infrastructure for two-wheelers is generally sufficient.

109. This shift in strategy can have far-reaching impacts particularly in other sectors. In the context of northern Côte d'Ivoire, better accessibility (all year-round passable road and at the shortest travel time possible) appears to be essential for health care. This applies to many categories or rural dwellers, from patients needing access to care during perinatal and antenatal periods, to healthcare staff who usually live in cities. In terms of education, connectivity needs are mainly related to ensuring accessibility to schools for teachers who usually live in urban centers. Although influenced by other factors, it is considered essential to bring these facilities closer to the population.

110. The project recognizes that rural markets and collection points are an element of rural infrastructure that is both complementary and necessary to roads. Agricultural products are sold either at collection points, often close to the fields, or at rural markets. These trading points are essential in the urban-rural relationship, as they are not only an essential step in supplying the cities but also serve as a platform for the main source of income for rural populations. The focus in agriculture should be on improving strategic roads needed to better connect agriculture collection points to secondary urban centers. Particularly in this context, where distances are large, better road conditions can lead to improved and more affordable transport of crops.

111. Sustainability is another central problem that the project seeks to address, beyond the extension of the road network. The project is addressing this through support for the definition and

[53] See in particular "Rural Road Investment: Efficiency Lessons from Burkina Faso, Cameroon, and Uganda". Gaël Raballand, Patricia Macchi and Carly Petracco, World Bank, 2010. This study shows the significant limitations of this indicator: for the Sub-Saharan African countries that have adopted it, it has led to over-investment in tertiary roads, generally to the detriment of secondary or even primary roads. Moreover, the RAI is not intended as an economic indicator but as a social one. Indeed, while it makes sense as a social indicator for accessibility, the two-kilometer buffer was shown to have a very limited impact on agricultural income.

[54] The World Health Organization (WHO) target is that 100 percent of the population should be within 5 km of a health facility, and the target for primary schools is 100 percent of the students within 3 km.

implementation of a genuine road maintenance strategy. Recent investments using the government's own resources show that it can finance the extension of the network, however, this is done at the expense of maintenance. It is therefore crucial to strike a balance between the need for investments to expand and maintain the network.

112. The project design is contextualized, not only in relation to the actual transport demand of each road, but also in relation to the types of structures chosen for investment. Thus, for roads with lower traffic, an intermediate level (focusing only on structures – bridges and culverts) will be considered. This is justified by the fact that on roads of lesser socio-economic importance, the real demand is for passability and less for comfort and speed. Particular attention will also be paid to the crossing points in these Sahelian regions where many rivers are seasonal and without a clearly defined path, and therefore where submersible slab structures seem more suitable.

113. In addition, implementation will incorporate the concept of "Green Roads For Water," which involves better water management to protect roads while using roads to collect water.[55] In an adaptive approach, water management and landscape protection measures will be systematically integrated into construction and maintenance activities. The proactive approach is to optimize the design of roads and structures to meet water management objectives on low-traffic roads in the semi-arid areas covered by the project.

114. In view of the large volume of activities, the project will be implemented in tranches. Thus, the current level of preparation makes it possible to envisage a first tranche made of the most important works (paved roads, 1/3 of the rural roads to rehabilitate and all road maintenance), which account for almost 50 percent of the financing, right after effectiveness. Component 2 activities will also be implemented in successive tranches, starting with the least complex (Subcomponents 2.3, 2.4 etc.).

Economic Analysis

115. Project investments in upgrading and paving the Dianra-Bouandougou road and rehabilitating and maintaining rural roads will induce economic benefits such as improved connectivity and road conditions, reduced travel costs, increased accessibility to basic socio-economic opportunities, and improved road safety. These positive impacts will spill over to the Northern region of the economy with better access to socio-economic infrastructure, enhanced access to markets, and boosted local agriculture production, which will result in improved household welfare, inclusion, and the region's overall resilience and economic growth.

116. The project conducted a standard economic analysis using the Highway Development and Management Model, version 4 (HDM-4) and the Roads Economic Decision Model (RED) on a sample of selected roads per region and per the type of work (asphalt, rehabilitation, or maintenance). HDM-4 was used to evaluate the 113 km road section between Dianra and Bouandougou and the RED model for rehabilitation and maintenance. While the traditional economic evaluation of roads using HDM-4 hardly captures the expected wider economic benefits, it is a globally accepted analytical tool to simulate lifecycle conditions and costs and performs well in providing direct benefits by considering economic decision criteria for multiple road design and maintenance alternatives.

[55] "Green Roads For Water," Guidelines for road infrastructure in support of water management and climate resilience. World Bank Group, 2021.

117. The Cost-Benefit Analysis (CBA) conducted with HDM-4 and RED includes, as part of the costs, total investments in infrastructure, rehabilitation, and maintenance over a lifetime period of 20 years. The main factors driving the results of these analyses are direct benefits associated with vehicle operating costs (VOCs); monetized travel time for passengers and freight, and the social and environmental cost of externalities such as vehicle emissions, energy consumption, and traffic noise. The main direct benefits from the project come from the savings in VOCs due to improved road conditions, travel time savings, road safety savings from prevented crashes, and maintenance savings resulting from road improvements. The model simulates direct benefits which are combined with road safety and greenhouse gas (GHG) to estimate the overall net benefits of the project. Results from the table below indicate that the investments have positive net present values (NPV) and economic internal rates of return (EIRRs) above the threshold of 10 percent. A sensitivity analysis was also conducted with 12 percent and 8 percent discount rates.

Table 3: NPV and Internal Rates of Returns (IRR) for Civil Works in the Project's Road Sections

	Baseline		Sensitivity (+30 percent Investments on All Roads, -20 percent Benefits on Earth Roads)		Sensitivity (discount rate)	
Road sections	IRR (%)	NPV (US$ m)	IRR (%)	NPV (US$ m)	NPV (8%) (US$ m)	NPV (12%) (US$ m)
Dianra-Bouandougou (paved)	17.9%	53.2	13.5%	28.7	77.1	34.7
Rural Roads Rehabilitation	26.5%	134.2	15.7%	53.6	173.2	103.5
Rural Roads Maintenance	31.6%	272.1	17.4%	109.0	345.2	214.8
Overall project	**26.7%**	**459.5**	**12.4%**	**165.1**	**595.5**	**353.0**

118. Overall, all planned road options are economically sustainable. The upgrading of Dianra-Bouandougou yields an 18 percent EIRR and an NPV of US$53 million. The maintenance and rehabilitation of rural roads are also economically justified and contribute to an economically justified project overall. A sensitivity analysis has been carried out to estimate the impact of increasing costs and/or decreasing benefits. For the asphalted Dianra-Bouandougou road in the different sensitivity tests (20 percent reduction in traffic, 30 percent increase in investment costs, 8 percent and 12 percent discount rates), the IRR varies between 13 and 18 percent, and in all cases, the NPV remains above zero. Likewise, the sensitivity analysis of rural roads to be maintained and rehabilitated yields a positive and high IRR and NPV. An example of a pessimistic sensitivity scenario for paved and earth roads combined is presented in the table above.

Table 4: NPV and IRRs with road safety and GHG net benefits

	Baseline		Road safety		GHG (High SPC)	
Road sections	IRR (%)	NPV (US$ m)	IRR (%)	NPV (US$ m)	IRR (%)	NPV (US$ m
Dianra-Bouandougou (paved)	17.9%	53.2	16.3%	41.3	22.3%	86.5
Rural Roads Rehabilitation	26.5%	134.2	27.4%	144.3	25.6%	126.1
Rural Roads Maintenance	31.6%	272.1	34.2%	316	29.9%	250.6
Overall project	**26.7%**	**459.5**	**27.9%**	**501.6**	**26.7%**	**463.3**

119. The introduction of road safety and GHG emissions (due to traffic) net benefits result in positive NPV and IRR rates for rural roads rehabilitation and maintenance and the Dianra-Bouandougou segment. The road safety net benefits are contributing to better economic and financial results in terms of NPV and IRR for the maintenance and rehabilitation of rural roads. However, road safety lowers the

IRR and NPV of the paved Dianra-Bouandougou segment when compared with the baseline scenario.[56]. The inclusion of net benefits from GHG emissions reduction due to improved vehicle fuel efficiency improves the NPV and IRR for the Dianra-Bouandougou road segment but slightly lowers the NPV and IRR for rural roads rehabilitation and maintenance (because of the overall increase in traffic demand on these roads). The estimated IRR and NPV are respectively 27.1 percent and US$1,422 million with the inclusion of both GHG emissions due to traffic and road safety net benefits and costs.

Table 5: Overall NPV and IRRs

	Baseline		Road Safety and GHG (High SPC)[57]	
Road sections	IRR (%)	NPV (US$ m)	IRR (%)	NPV (US$ m)
Dianra-Bouandougou (paved)	17.9%	53.2	18.2%	164.4
Rural Roads Rehabilitation	26.5%	134.2	26.7%	408.7
Rural Roads Maintenance	31.6%	272.1	32.2%	849.0
Overall project	**26.7%**	**459.5**	**27.1%**	**1,422.1**

Road Safety

120. Road safety costs and benefits of the project are assessed using the economic appraisal tool developed by GRSF called the Road Safety Screening and Appraisal Tool (RSSAT). It allows the identification of the optimal scope of road infrastructure interventions needed to save lives through World Bank-financed transport projects. The road safety assessment was conducted using photos taken during the field visits and satellite imageries. Given the scope (11 regions) and size (7,450 km of rehabilitated and upgraded roads, and 7,800 km of maintained roads) of the project, a sample of the most representative roads was done: two roads per region were preselected and analyzed for a total of 588 km (rehabilitation on 239 km of roads and maintenance on 349 km). The analysis reveals that the overall project safety impact (PSI) for the rehabilitated and maintained roads will be 0.9 and 0.69 respectively, which indicate a fatality reduction of 10 and 31 percent, respectively, once the project becomes operational. These results are heterogeneous across regions (see table in the economic analysis annex). For the sample roads (658.2 km), the estimated road safety benefits in 20 years will be around US$127 million.

121. Globally, the project's average safety impact is estimated at 0.8, which indicates a 20 percent reduction in fatalities once the project is operational and the safety features are integrated in the design of the asphalt road between Dianra and Bouandougou and in all rural roads to be rehabilitated and maintained. The results of the road safety screening and road safety audits to be carried out will be used in the design of the road works to be implemented under the project. Works will aim at a complete upgrade of all the road signs, whatever the type of works/roads. Particular attention will be paid to speed calming measures in village crossings, schools, health centers and markets nearby roads. Road safety audits will be conducted before and after works to ensure that the roads are designed, upgraded, rehabilitated and maintained in accordance with best practices in road safety. These audits will be conducted by OSER on a sample of unpaved roads and by an independent iRAP accredited consultant for the paved road. Given that the planned Dianra-Bouandougou asphalted road is the only project road that

[56] This is mainly because the Project Safety Impact (PSI) of the Dianra-Bouandougou road is greater than 1. Its rehabilitation will increase speed and increase the risk of crash and fatalities which in turn will reduce the main benefits of the project.
[57] Using Low Shadow Price of Carbon leads to qualitatively similar results: EIRR (28.1 percent) and NPV (US$M1,494).

yields a PSI > 1, with a value of 1.62 and a net cost of US$35 million, additional measures will be considered for this specific road and will aim for a target safety level of at least 3 stars for all road users, according to the International Road Assessment Program (iRAP[58]) methodology.

122. A GHG assessment comparing the "with project" and "without project" scenarios was conducted to compute the project's net GHG emissions over a 20-year evaluation period, using distinct methodologies and tools to estimate the emissions of (i) the 113 km section Dianra-Bouandougou to be asphalted; (ii) a sample of the 15,250 km of rural roads to be rehabilitated and maintained, and (iii) the planting of 2,800 ha of trees along selected roads and sites. For the Dianra-Bouandougou section, the traffic/demand projections and related emissions are obtained through the Highway Development and Management (HDM-4) model originally developed by the World Bank, which simulates road conditions over the lifecycle of the road and computes the resulting financial, economic and environmental costs. Because of lower traffic volumes on rural earth roads, the RED Model was used to compute traffic projections on the rural roads network and the HDM-4 model was used to estimate emission factors.

123. The additional carbon sequestration enabled by the project thanks to the planting of trees was computed using the Integrated Valuation of Ecosystem Services and Tradeoffs (InVEST) Carbon Storage and Sequestration model[75] developed by Stanford University's Natural Capital Project. Using Land Use Land Cover (LULC) maps and data on carbon stocks in above and belowground biomass, soil, and dead organic matter in the project area, it estimates the amount of carbon currently stored in a landscape or the amount of carbon sequestered over time. In the project scenario, a row of trees will be planted along selected roads in lowly forested areas (mainly covered in bushes and shrubs).

124. The total net GHG emissions of the development, rehabilitation and maintenance of the selected road network will be -113 Ktons CO_2 for the project lifetime, and -3 Mtons CO_2 when considering carbon sequestration by the planting of 2,800 ha of trees. With and without considering carbon sequestration, the project will avoid an annual total of 155 Ktons CO_2 and 5.7 Ktons, respectively. The project baseline (without project emissions) is 3,993 Ktons of CO_2 and the gross total (with-project emissions) is 3,880 Ktons CO_2. GHG emissions reductions are the result of improved road conditions and their continuous good maintenance, especially on the 113 km paved section of the Dianra-Bouandougou road, which result in higher average speeds (80 km/h from a 30 km/h at baseline) and thus lower emission factors, lower fuel consumption and lower vehicle deterioration. Also, planting trees along rural roads highly contributes to further reducing GHG emissions in addition to stabilizing soil, restoring natural resources, and improving erosion and flood management.-

Table 6. GHG emissions summary

	Baseline Emissions	Project Gross Emissions		Project Net Emissions	
		Without Carbon Sequestration	*With Carbon Sequestration*	*Without Carbon Sequestration*	*With Carbon Sequestration*
Lifetime (tCO2)	3,993,341	3,880,005	900,865	-113,337	-3,092,467
Annual (tCO2)	199,667	194,000	45,043	-5,667	-154,624

125. The project will enhance the climate resilience of rural roads and of the communities served, and it will contribute to reduction of GHG emissions. Both non-strategic and strategic rural roads will be rehabilitated (in specific spots and in full, respectively) and maintained according to climate resilience

[18] See iRAP.org

standards, which includes adopting the "Green Roads for Water" approach for more efficient water management, especially in regions prone to flooding. The project will also support investments in the protection of forested areas and afforestation, the deployment of solar energy for lighting, the building or improvement of the resilience of essential infrastructure for local communities, and capacity building activities aimed to facilitating and promoting the implementation of nature-based solutions. Further information on how the project contributes to climate adaptation and mitigation is in Annex 3.

126. Citizen Engagement: The project seeks to support the engagement of targeted beneficiaries and other stakeholders through feedback mechanisms such as consultative processes and the GRM. Periodic consultations are an integral part of the feedback process to allow for course correction when necessary and will be aligned with the sequencing and implementation progress of project interventions. In terms of grievance handling, the project will establish a project GRM for the uptake, registration, assessment, and resolution of complaints related to project interventions. Additionally, the GRM will be sensitive to SEA and SH complaints that will be handled through a specific, survivor-centered approach. Given that poor rural connectivity is exacerbated by exposure to climate related events that can cause significant and recurrent road damage, an effective GRM will also operate as an alert system when major damages occur. The PCU will develop a citizen engagement plan to ensure that: (a) the citizen consultation and participation process is inclusive, transparent, and responsive to the needs of the targeted communities and (b) the GRM is effective and accessible to all stakeholders, particularly, vulnerable groups. The PCU will ensure that the citizen engagement plan is properly implemented, and that project-affected people's points of view and concerns are fully addressed.

127. For Component 1, a community monitoring system will be established, building on the existing scheme implemented by AGEROUTE to provide semi-annual feedback on rehabilitation and maintenance works. Under Component 2, implementation will strongly involve beneficiaries to strengthen social accountability and promote transparency. For localized activities (Subcomponents 2.1 and 2.4), priorities in terms of services and functions of the facilities will be defined by the respective beneficiaries of which the needs of vulnerable groups such as low-income and disabled people will be prioritized. The beneficiaries including teachers and parents through COGES for schools, staff and patients for health centers, and traders, intermediary groups and other producers' organizations for agricultural production collection points.

128. At the works monitoring stage, the process will involve the establishment of two instruments: (a) a community-based monitoring system that will ensure continuous monitoring of activities through the collection of feedback from local communities which is used to feed into the decision-making process; and (b) an accessible and effective GRM in terms of collecting and processing complaints. For activities to improve living conditions in tertiary cities (Subcomponent 2.4), identification will be done by not only associating local public and private actors, but also local civil society (traditional leaders, religious leaders, etc.), with particular attention to women and youth. As regarding transhumance corridors (Subcomponent 2.2), activities will be carried out in close consultation with the populations of areas crossed, including through the establishment of delimitation committees involving all stakeholders (via consultation sessions) to identify consensual and sustainable solutions to problems related to the management of agro-sylvo-pastoral resources. Reforestation activities (Subcomponent 2.3) will be patiently negotiated with communities as land is rarely owned by individuals but rather by lineages, and for these populations, planting a tree means appropriating land or expropriating landowners. In addition,

implementation activities will rely on the populations' traditional knowledge on the usefulness of trees to inform the choice of forest, utility and agroforestry species to be promoted.

B. Fiduciary

Financial Management

129. This is a US$500 million (US$300 million from World Bank IDA SUW resources and US$200 million from AIIB) IPF including US$190 million of PBCs. The financing associated with PBC includes US$98.650 million equivalent from IDA and US$91.35 million from AIIB. The eligible expenditures are under Subcomponent 1.1a and Subcomponent 1.1b. As part of the project preparation phase, an FM assessment was completed in May 2022 in accordance with the FM Manual for World Bank-Financed Investment Operations effective on March 1, 2010 and reissued on September 7, 2021, and the supporting guidelines. As stated above, the project will be implemented by the CC-PRICI which is currently implementing PREMU (P156739; US$200 million equivalent); PIDUCAS (P151324; US$120 million equivalent) and PACOGA (P159697; US$315 million equivalent). CC-PRICI also implemented PRICI (P124715 and P156253) and PAMOSET (P156900; US$30 million equivalent). The overall performance of the PREMU, PIDUCAS and PACOGA projects following the last FM supervision was rated Satisfactory, mainly due to the fiduciary arrangements in place ensuring a minimum acceptable risk management during the last fiscal year. Their compliance with other financial requirements - including timely submission of unaudited interim financial reports (IFRs), proper bookkeeping and appropriate banking arrangements, unqualified external audit reports - was also deemed satisfactory.

130. The FM assessment of CC-PRICI focused on the following areas: planning and budgeting, financial accounting, financial reporting, and internal controls and external auditing that are needed to satisfy the World Bank's Policy and Directive for IPF. The assessment determined that the CC-PRICI is familiar with the World Bank FM requirements and is satisfactorily managing the ongoing projects. The current FM staffing - including the assignment of one financial controller and one public accountant (*Agent comptable du projet*) from the Ministry of Finance to the project – is adequate. The CC-PRICI FM staff consists of a financial and administrative manager, an FM specialist appointed on PREMU, two accountants and four assistant accountants who are experienced in implementation of World Bank-financed projects. Moreover, there are no major FM issues raised under the projects managed by CC-PRICI during the supervision missions or by the auditors, and there are no overdue audit reports or unaudited IFRs. Overall, the FM arrangements meet the minimum fiduciary requirements under the FM Manual for World Bank for IPF.

131. The FM capacity of CC-PRICI will be further strengthened by: (i) updating the existing FM procedures manual before effectiveness of the World Bank financing; (ii) updating the configuration of the existing accounting software right after effectiveness of the World Bank financing; (iii) in line with the Use of Country Systems stipulated in Côte d'Ivoire decree n° 475 governing donor-financed projects, a financial controller and a public accountant (supported by a ''regisseur'' appointed to regional PRICI' coordination in Korhogo) will manage the transactions of the new project; (iv) the project internal audit function will be managed by the General Inspectorate of Finance (*Inspection Générale des Finances* - IGF) in collaboration with the internal audit team of CC-PRICI; and (v) finally, the CC-PRICI will be required to submit to World Bank and AIIB: (a) a consolidated AWPB not later than November 30 of the year preceding the year the AWPB will be executed; (b) consolidated, unaudited IFRs by quarter; and (c) consolidated

audited annual financial statements (e.g., audit reports prepared by independent external auditors) submitted to the World Bank and AIIB not later than June 30 of each year. The project's annual accounts will be audited by an independent external auditor to be recruited in compliance with Terms of Reference (ToRs) acceptable to the World Bank.

Procurement

132. The project will be entrusted to CC-PRICI, which is already satisfactorily implementing several ongoing World Bank projects including managing the whole procurement process. CC-PRICI has experience in World Bank procurement procedures, has a manual of procedures in accordance with World Bank requirements, and has a procurement team comprising three procurement specialists and five procurement assistants. Furthermore, it is expected that some procurement activities will be carried out by the regional councils, but with fiduciary responsibility remaining with the PCU. The key risks identified for procurement under the project are as follows: (i) technical staff not familiar with performance-based contracts planned under the project, which may lead to poor technical documents and procurement processes, given that there is no real experience in Côte d'Ivoire on this matter; (ii) staff involved in the project at the level of regional councils may not have sufficient knowledge of World Bank procurement procedures; and (iii) inadequate communication and interaction between the regional councils and the PCU may lead to delays in procurement processes for activities to be handled by regional councils. The overall procurement risk of the project is Substantial.

133. To reduce procurement risks for CC-PRICI, the following measures have been identified: (i) procurement processes to be handled by regional councils are limited to small contracts falling into their mandate (amount of less than US$300,000); (ii) the PCU will assign/recruit a seasoned procurement specialist, assisted by procurement assistants who will support regional councils; (iii) a procedures manual reflecting the specificities of the proposed project (activities, institutional arrangements) is under preparation and will be finalized before project effectiveness; and (iv) a capacity building program for all stakeholders will be developed and implemented, including on the new types of contracts. Nevertheless, technical responsibilities related to procurement (ToR and technical standards) will remain with the relevant SIAs which have technical mandates and responsibilities. Procurement activities will be carried out in accordance with the World Bank Procurement Guidelines and the provisions stipulated in the Financing Agreement.

134. An assessment of the capacity of the PCU to implement procurement activities has been carried out to review the organizational structure for the implementation of the project, as well as the procurement capacities (past procurement experience, staff in charge of procurement, tools including manuals, procurement filing, and so on).

135. The CC-PRICI will be responsible for coordinating all procurement activities. In close collaboration with the implementing agencies, the PCU will focus on the following: (a) preparation and update of the procurement plans; (b) preparation, finalization, and launch of the Requests For Proposals (RFPs) and bidding documents; (c) drafting the minutes of bid openings and preparation of the evaluation reports; (d) submission of procurement documents (ToRs, RFPs, bidding documents, evaluation reports, contracts, and so on) to the World Bank when prior review is required; (e) preparation of contracts and overseeing payments to contractors; and (f) drafting the procurement progress report and coordinating activities. For activities falling in the mandate of regional councils, the PCU will support local government staff and

entities involved in the procurement process, including hands-on support on the following: (a) preparation, finalization, and launch of the RFPs and bidding documents; (b) drafting of minutes for bid openings and preparation of the evaluation reports; and (c) preparation of the contracts.

136. Project Procurement Strategy for Development (PPSD). The PPSD and the procurement plan to identify the optimum procurement strategy for meeting the development objectives of the project have been approved at negotiations. The PPSD has shown that the domestic market has the capacity to meet the needs of the project. Most contracts, suppliers, contractors and national consultants could carry out the various contracts. The international market will be solicited for consultancy services and works on paved roads. However, particular attention will be paid to the following points: (i) prequalification for works mobilizing national SMEs, in order to verify their capacity in advance; (ii) strengthening capacities of the various actors for OPBRCs; and (iii) early preparation and implementation of RAPs.

C. Legal Operational Policies

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

137. OP 7.50 is triggered because project-financed activities may use or risk polluting the waters of the Comoe, Sassandra, Volta and Niger Rivers Basins, which are considered international waterways. The exception to the riparian notification requirement according to paragraph 7(a) of the Policy applies because activities are limited to the upgrading and modernization of existing, small-scale schemes which will not cause changes in the existing use of water or in water quality. The exception to the notification requirement was approved by the RVP on December 16, 2022.

D. Environmental and Social

138. The proposed project will have an overall positive environmental impact when completed. It will significantly contribute to the reduction of travel time in selected areas, the reduction of GHG emissions and traffic hazards for users and nearby communities in the villages, as well as to reforestation, water resources management and an improvement of rural trade activities. However, the project's environmental and social risk classification is considered Substantial because of the risks associated with the proposed investments on rural connectivity infrastructure, and notably the rehabilitation of transhumance corridors/tracks (900 km) and trails within 36 classified forests, the extension and maintenance of the existing road network (7,450+7,800 km) and the asphalting of 238 km. There are also risks associated with the project's investments in reforestation, notably the creation or rehabilitation of agricultural production collection points for food crops, development of rural markets and tree planting on sites along the roads developed/rehabilitated or maintained under the project (2,800 ha). Possible environmental and social impacts are related to the influx of labor, employment expectations, and working conditions; stakeholder engagement and communication (e.g., exclusion of certain groups); displacement (economic and physical); waste management and pollution; nuisance and road traffic safety; community health and safety, including Gender-Based Violence, SEA/SH, and road safety); potential impacts on natural habitats and security hazards linked to sporadic, armed attacks of civilians in the region. To manage these risks, the GoCI has developed and adopted the following safeguards instruments: an Environmental and Social Management Framework (ESMF) including guidelines on Pest Management, a

Resettlement Policy Framework (RPF), a Security Risk Assessment (SRA), an Environmental and Social Commitment Plan (ESCP), a Stakeholder Engagement Plan (SEP), and Labor Management Procedures (LMP). The final version of the ESMF, RPF, SEP, ESCP[59] and LMP were approved by the World Bank and disclosed in-country and on the World Bank website[60]. A gender-based violence/SEA/SH assessment and action plan will be prepared and publicly disclosed no later than 90 days after project effectiveness. Further, the PCU will be staffed with an Environment Specialist, and a Social Development Specialist while safeguards assistants will be in place in the target regions. All site-specific instruments such as ESIA, ESMP, ESMP Construction, etc. will be prepared, disclosed, consulted upon, and adopted prior to the start of any activity requiring the development of a specific environmental and social instrument and shall be thereafter implemented throughout project implementation

V. GRIEVANCE REDRESS SERVICES

139. 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[61]). The GRS ensures that complaints received are promptly reviewed in order to address project-related concerns. Project affected communities and individuals may submit their complaint to the Bank's independent Accountability Mechanism (AM). The AM houses the Inspection Panel, which determines whether harm occurred, or could occur, as a result of Bank non-compliance with its policies and procedures, and the Dispute Resolution Service, which provides communities and borrowers with the opportunity to address complaints through dispute resolution. Complaints may be submitted to the AM at any time after concerns have been brought directly to the attention of Bank Management and after Management has been given an opportunity to respond. For information on how to submit complaints to the Bank's Grievance Redress Service (GRS), please visit *http://www.worldbank.org/GRS*. For information on how to submit complaints to the Bank's Accountability Mechanism, please visit *https://accountability.worldbank.org*.

VI. KEY RISKS

140. The Systematic Operations Risk-Rating Tool (SORT) was applied to evaluate potential risks associated with the project. The overall risk rating for the proposed project is Substantial., because of the associated (i) political and governance; (ii) institutional capacity for implementation and sustainability; (iii) environmental and social; (iv) stakeholders; and (v) security risks.

141. Political and Governance (Moderate). The political risk is moderate at this time, but the context will be marked by local elections in 2023 and presidential elections in 2025. The electoral period could be characterized by a slowdown in project implementation and/or attempts to politicize investment decisions. Previous elections were held with socio-political troubles including unrest. In the project areas, tensions could be exacerbated by the influx of refugees from neighboring countries and particularly from Burkina Faso, as well as by ethnic and religious complexity. Local elections may lead to changes in the regional council's political management. This could have a negative impact on project implementation, in particular activities to be carried out by regional councils and/or those requiring strong beneficiary involvement (i.e., agricultural logistics supply chain, pastoral connectivity). This

[59] The ESCP was disclosed on March 7, 2023 (GMT).
[60] *https://projects.worldbank.org/en/projects-operations/document-detail/P178362?type=projects*
[61] *http://www.worldbank.org/en/projects-operations/products-and-services/grievance-redress-service http://www.inspectionpanel.org/*

risk would be mitigated through: (a) citizen engagement activities and (ii) performance contracts to be signed between regional councils and the PCU framing project selection criteria and implementation modalities. From the point of view of governance, experience from ongoing projects has shown some concerns about ethics and deontology in procurement processes. In addition to the provisions stipulated in the World Bank's Guidelines, the government recently promulgated a code of ethics in the procurement sector, which should produce positive effects if the sanctions provided therein are effectively applied.

142. Macroeconomic (Moderate). With the volatility of certain prices prevailing at the global level and particularly with the ongoing Russia's invasion of Ukraine, there is a risk of inflation which may affect some of the project's targets, especially the kilometers of rural roads to be rehabilitated (to be evaluated during Mid-term Review). Moreover, even though FER now has a strategy to clear its arrears (almost US$300 million for 2021), there is a risk that the back stock will replenish again. The main mitigation measures are already built into the project design: IDA's financial contribution to road maintenance (2024-2026 maintenance campaigns), TA for the reforms, and especially PBC 6 covering FER's financing commitments from 2025. This comes in addition to other commitments made by the government within the framework of the MCA, in particular aimed at reducing payment terms to less than 120 days.

143. Implementation Capacity for Implementation and Sustainability (Substantial). While CC-PRICI has a good track record in coordinating World Bank investment projects, lessons learned from the PRICI and PAMOSET projects which closed not long ago and those under implementation (PACOGA and PIDUCAS) show that the SIAs do not have sufficient capacity, especially regarding contract management. There will also be capacity constraints for the preparation and supervision of studies and works relating to infrastructure other than roads or of an innovative nature (water resources management etc.). Regional councils, although they are carrying out some activities, have limited capacity. These risks may be increased by the northern regions' distance from Abidjan in a context of fragility and highly centralized public administration. Mitigation measures include: (i) TA on contract management; (ii) theoretical and practical (including hands-on) training sessions; (iii) staffing of CC-PRICI with specialized staff tasked with supervising infrastructure activities other than roads; and (iv) decentralized units for the PCU and AGEROUTE to be closer to works sites in the North. An assessment of the regional councils' capacity will also be made to identify tailored measures to be implemented.

144. Environmental (Substantial). The proposed project will have an overall positive environmental impact when completed given that it will significantly contribute to the reduction of GHG emissions and traffic hazards for the users and nearby communities in the villages, as well as to reforestation and water resources management activities. Nonetheless, substantial risks from this project are expected from road alignment changes during the construction of the road to be paved and the numerous construction activities. The potential negative environmental impacts include limited vegetation clearing, soil degradation, air and water pollution, road accidents, temporary nuisances to people living near civil works sites (dust, noise, etc.), increased access to or through potentially sensitive habitats, and damage to physical cultural resources. All the environmental impacts are expected to be fully mitigated by the adoption of Good International Industry Practice (GIIP). Regarding road safety, this project will apply the RSSAT and comply with the requirements from the Road Safety Good Practice Note. Mitigation measures will be applied in accordance with the required instruments recommended under the Environmental and Social Framework (ESF).

145. Social (Substantial). The project will have an overall positive social impact, especially by improving transport connectivity in rural areas and thereby providing local communities with reduced time and cost of travel, better access to basic services, more marketing opportunities for agricultural products, and access to non-

agricultural jobs in cities. Nevertheless, the social risk of this project is rated as Substantial, reflecting potential significant issues related to: (i) land acquisition and resettlement of Project Affected Persons (PAPs) resulting from works that may require acquisition of strips of land to improve road alignments during the construction of the Dianra-Bouandougou road; and (ii) temporary restriction of access to livelihood and income generating activities for people living in and around the project area during civil works associated with the project. Mitigation measures will be applied in accordance with the required instruments recommended under the ESF and the SEA/SH Good Practice Note.

146. Sexual Exploitation and Abuse and Sexual Harassment (Moderate). A SEA/SH risk assessment classified the project activities as moderate. National factors contributing to these risks include the lack of laws on domestic violence and marital rape. At the project level, factors that explain potential SEA/SH risks include, firstly, that the project will be located near pedestrian routes used by women in their daily activities. There is also the fact that the project will take place mainly in the north of the country, which is more plagued by poverty and insecurity. In addition, the Recipient's monitoring capacity in some of the 11 project regions may be limited by the geographical scope. These activities can lead to scenarios where women are exposed to sexual exploitation, abuse, and harassment. Nevertheless, it should be noted that the project foresees medium-sized rural constructions, which will not involve a massive influx of labor.

147. Following the recommendations of the SEA/SH Good Practice Note for investment projects financing major civil works, these risks will be mitigated through measures outlined in the SEA/SH response and mitigation action plan, which includes an accountability and response framework, codes of conduct prohibiting and sanctioning SEA/SH behavior, training and awareness raising activities for workers and community members, consultations with women and vulnerable groups in safe and supportive locations, and procedures for dealing with SEA/SH complaints in an ethical and confidential manner following a survivor-centered approach, including referral pathways to assist survivors of gender-based violence. The SEA/SH Prevention and Management Action Plan shall be developed and disclosed, no later than 90 days after the project effectiveness.

148. Stakeholder (Substantial). The multisectoral scope of the project requires the engagement of, and coordination among, various stakeholders, including ministries, the private sector, regional councils, beneficiaries and non-state organizations. Mitigation measures include the setting up of a strong Citizen Engagement Action Plan, with consultation platforms at the local and regional levels. Following the example of the other projects under the CC-PRICI, Memorandum of Understandings (MoUs) will be signed with government agencies and performance contracts will be signed with regional councils.

149. Security risks (Substantial). The security assessment[62] conducted during project preparation in the project regions, and especially on the six border regions, identified violent extremism, community and socio-political conflicts, and conventional and cross-border crime as the main security threats to project implementation. It evaluated the risk of violent extremism – armed attacks by a jihadist group on a site or on a project member or partner, kidnapping of a project member or partner, assassination of a member of the project, destruction and/or looting of a project site, structure or equipment – as very high in the Bounkani region and high in the district of Savanes (which includes the Bagoue, Poro and Tchologo regions). Some northern regions of Côte d'Ivoire bordering Mali and Burkina Faso (mainly Bounkani) are facing security incidents linked to the Sahel crisis; these are increasing in frequency and intensity. To mitigate the security risk, the government has deployed additional security forces in the region and strengthened its intelligence cooperation with neighboring Mali and

[62] Security Risks Evaluation (*Evaluation des Risques Sécuritaires*, ERS) - Rapport Provisoire, July 2022

Burkina Faso. The main mitigation measure is the Security Management prepared and approved before project appraisal, which includes exceptional measures inspired, in particular, by the experience of road projects in the Far-North of Cameroon (CEMAC[63] Transport and Facilitation Project, P079736) would be deployed to ensure the security of project works. These would include specific security arrangements involving the Ministry of Defense. Even with these mitigation measures, this risk is considered as Substantial, given that the situation in some regions remains unstable and volatile.

150. The involvement of the Ivorian Armed Forces for security protection is likely to cause negative reactions and criticism from international and local human rights groups and media. This risk will increase in the event of any allegations of human rights violations by the various branches of the Ivorian Armed Forces as well as possible attacks by jihadists targeting the armed forces or the population around work sites. While some project areas remain unstable and volatile and the reputational risk cannot be fully mitigated, the World Bank will deploy a proactive and multidimensional corporate communications strategy, targeted as follows: (i) internally, by establishing communications and protocol guidelines for the management and task teams involved in the project (media training, Q&A) and developing a strong narrative to document the impact of the project; and (ii) externally, by identifying and engaging with key local and international NGOs and media to regularly brief and update them on the ongoing works and gather information regarding their perceptions and work in the project area. The deployment of this DST will follow the provisions spelled out in the Financing Agreement on Use of Military and Security Actors. If the armed forces are used the Recipient will follow the provisions as set in the project financing agreement.

151. Overall, it is likely that recurring community conflicts – such as land, chieftaincy and transhumance or domestic pastoralism conflicts that could also have ethnic, religious, or political ramifications – might occur, in particular in the Bounkani region and the Savanes district. However, the potential impacts of such conflicts on the project are considered moderate since: (i) law enforcement agencies have experience in managing them; (ii) they are often geographically localized with little risk of contagion to non-affected areas. Nevertheless, since they could lead to violence, mitigation actions involving inclusive and participatory approaches within affected communities will be used when necessary.

152. Road safety and security risks related to more conventional criminality (robbery and theft against project personnel or project assets) are considered moderate despite concerning, in the first place, communities and workers in project areas. They will be mitigated through the presence of the defense forces in project areas and through preventive and dissuasive measures (escorts for high-value assets or in high-risk areas, static site guards, etc.).

153. Special security arrangements, including the deployment of the Permanent Security Unit (*Détachement de Sécurité des Travaux* - DST), could be envisaged in some areas if the level of threats warrants it. While such deployment would mitigate security risks, it could carry risks of improper behaviors or poor treatment of civilians, which would be particularly damaging for the project and the government. Mitigation measures will include:

(i) Establishment of high standard rules for the selection of military personnel for the DST and training of DST personnel in international humanitarian law and human rights as well as gender-based violence issues and awareness. The Ministry of Defence will certify that background and security checks are performed to ensure that DST personnel have not been found guilty of improper behaviors and abuse and are

[63] Communauté Economique et Monétaire des Etats d'Afrique Centrale – Central African Economic and Monetary Community (CEMAC)

complying with the Military Code of Justice and Code of Conduct. Any member of the DST that is accused of any violation or abuse will be immediately removed from the Project area.

(ii) The GRM will be in place, and complaints involving members of the military will be redirected to the military justice system. The key principles used to guide the GRM are transparency, accessibility, and effectiveness. The GRM will also ensure that issues are proactively being identified in the case of sensitive complaints that are not likely to be raised.

(iii) TPM will be deployed to assess social and security risks, and report directly to the Project Coordinator.

154. In addition, works will be suspended: (i) if the World Bank receives evidence that military combat activity has escalated and/or the security situation has deteriorated, and if in the opinion of IDA, it would be improbable that the works could be completed; and (ii) if the Collaboration Framework Agreement is amended, suspended, terminated or waived to the extent that the operations, security, code of conduct and other arrangements established in the framework are adversely or completely changed.

VII. RESULTS FRAMEWORK AND MONITORING

Results Framework

COUNTRY: Cote d'Ivoire

Cote d'Ivoire Inclusive Connectivity and Rural Infrastructure Project

Project Development Objectives(s)

The project development objective (PDO) is to provide inclusive and climate resilient rural road connectivity in selected underserved regions of Cote d'Ivoire

Project Development Objective Indicators

Indicator Name	PBC	Baseline	Intermediate Targets				End Target
			1	2	3	4	
Inclusive rural road connectivity							
Modified Road Access Index (-5km) in the selected regions (Percentage)		77.00	79.00	83.00	87.00	90.00	90.00
Climate resilient road connectivity							
People provided with improved climate resilient road access (number) within 5 km in the selected regions (Number)		0.00	500,000.00	1,200,000.00	3,300,000.00	3,670,000.00	3,670,000.00
Female (Percentage)		51.00	51.00	51.00	51.00	51.00	51.00
Beneficiaries satisfaction							
Population within 5 km reporting satisfaction with the quality of rural roads in their area (Percentage)		20.00	40.00				75.00

Intermediate Results Indicators by Components

Indicator Name	PBC	Baseline	Intermediate Targets				End Target
			1	2	3	4	
Component 1 - Inclusive and Resilient Rural Connectivity Infrastructure							
Rural roads rehabilitated under the project (Kilometers)		0.00	1,500.00	4,500.00	6,000.00	7,450.00	7,450.00
Rural roads maintained under the project using OPBRC (Kilometers)		0.00	600.00	600.00	1,200.00	2,000.00	2,000.00
Built or rehabilitated structures (Number)		0.00	50.00	100.00	250.00	450.00	600.00
Strategic rural roads provided with climate change resilience features (Percentage)		0.00	20.00	50.00	75.00	100.00	100.00
Roads provided with road safety features (Kilometers)		0.00	6,000.00	8,000.00	11,000.00	15,493.00	15,493.00
Average travel time along key roads maintained (Minutes)		50.00	30.00	30.00			30.00
Paved roads under maintenance (Yes/No)		No	No	No	Yes	Yes	Yes
Rural roads maintained with FER financing under the project (Kilometers)	PBC 6	0.00	7,800.00	9,500.00	12,000.00	15,250.00	15,250.00
Maintenance contract signed for Dianra-Bouandougou-Bouake Road (Yes/No)	PBC 5	No	No	Yes	Yes	Yes	Yes
Component 2 - Rural socio-economic infrastructure							
Mini-storage facilities used by female entrepreneurs in improved markets		0.00	40.00	40.00	40.00	40.00	40.00

Indicator Name	PBC	Baseline	Intermediate Targets				End Target
			1	2	3	4	
(percentage) (Percentage)							
Trees planted (Number)		0.00	200,000.00	500,000.00	900,000.00	1,125,000.00	1,125,000.00
Rural schools and health centers with improved conditions (Number)		0.00	300.00	450.00	600.00	830.00	830.00
Women's group supported with IMTs (Number)		0.00	12.00	100.00	150.00	150.00	150.00
Component 3 - Capacity Building, Support to the Institutional Framework and Sector Strategies							
Rural road's strategy adopted (Yes/No)	PBC 1	No	Yes				Yes
Rural road's pluriannual priority investment program adopted (Yes/No)	PBC 2	No	Yes				Yes
Road maintenance strategy adopted (Yes/No)	PBC 3	No	Yes				Yes
Road Maintenance Program adopted (Yes/No)	PBC 4	No	Yes				Yes
Improved institutional oversight capacity in the roads sector (Yes/No)		No	Yes				Yes
Female beneficiaries of capacity building activities (Number)		0.00	30.00	45.00	60.00		60.00
Graduates who report being employed 12 months after they complete internship which are women (percentage) (Percentage)		0.00	0.00	70.00	70.00	75.00	75.00
Road safety audit recommendations addressed (Percentage)		0.00					100.00

Indicator Name	PBC	Baseline	Intermediate Targets				End Target
			1	2	3	4	
Road safety audits conducted (Number)		0.00	22.00	30.00	36.00	44.00	44.00
Meteorological facilities rehabilitated / constructed in the selected regions (Number)		0.00	0.00	30.00	30.00	30.00	30.00
Component 4 - Support to Project Management							
Complaints addressed timely (Percentage)		0.00	100.00	100.00	100.00	100.00	100.00
Technical audits conducted (Number)		0.00	15.00	30.00	45.00	60.00	60.00
Results and key recommendations of feedback and beneficiary surveys incorporated into project activities (Percentage)		0.00	50.00	60.00	70.00	80.00	100.00

Monitoring & Evaluation Plan: PDO Indicators

Indicator Name	Definition/Description	Frequency	Datasource	Methodology for Data Collection	Responsibility for Data Collection
Modified Road Access Index (-5km) in the selected regions	People living within 5 km of the rural roads rehabilitated/maintained by the project in each of the 11 regions. The target should be met in each of the regions.	Annual	AGEROUTE GIS	Percentage of population within the 5-km strip of all strategic road sections rehabilitated/maintained divided by the total population of the region	AGEROUTE

People provided with improved climate resilient road access (number) within 5 km in the selected regions	Measures the number of beneficiaries with improved climate resilient road access to markets, schools and health facilities in the 11 regions. End target is calculated based on population within a 5km-buffer zone on each road section provided with climate change features under the project.	Annual	GIS database prepared during project preparation	Measures the percentage of strategic roads (rehabilitated or maintained) improved with climate change features	AGEROUTE
Female	Percentage of women within the rural population in the selected regions				
Population within 5 km reporting satisfaction with the quality of rural roads in their area	Measures the public feedback on the road improvements along selected few project-financed road selections. The baseline is estimated as the percentage of population of all the 11 regions satisfied with the existing condition of the candidate roads, based on a sample of 3,000-4,000 people surveyed (within 5 km to the road) .	Every 2 years	Project monitoring reports	Surveys	PCU

Monitoring & Evaluation Plan: Intermediate Results Indicators					
Indicator Name	**Definition/Description**	**Frequency**	**Datasource**	**Methodology for Data Collection**	**Responsibility for Data Collection**
Rural roads rehabilitated under the project	Number of Kms of rural (unpaved) roads upgraded	Annual	Supervision consultants' progress reports / AGEROUTE Quarterly report	Total cumulative length of unpaved road sections upgraded, with works fully completed in the 11 regions	AGEROUTE
Rural roads maintained under the project using OPBRC	Measures the total length of roads maintained using OPBRC under the project	Annual	Supervision Engineers' progress reports / AGEROUTE Quarterly reports	Total length of road sections under OPBRC in the 11 regions	AGEROUTE
Built or rehabilitated structures	Number of structures constructed on non-strategic roads in the 11 regions	Annual	Supervision Engineers' progress reports / Regional Councils Quarterly reports	Structures built/rehabilitated on non-strategic roads (works completed) in the selected regions	Regional Councils
Strategic rural roads provided with climate change resilience features	Measures the percentage of strategic roads	Annual	Supervision consultants'	Total length of strategic road sections which	AGEROUTE

	(paved/rehabilitated/maintained - 15,250 km of unpaved roads and 243 km of paved roads) improved with climate change features in the 11 regions		progress reports	have been improved with specific climate resilience features, including the paved road section	
Roads provided with road safety features	Measures the length of strategic roads (paved/rehabilitated/maintained) improved with road safety features	Annual	Supervision consultants' progress reports	Total length of road sections which have been improved with specific road safety features and confirmed by audits	AGEROUTE
Average travel time along key roads maintained	Average travel time per 20-km along selected roads under maintenance	Annual	Supervision Engineers' monitoring reports / AGEROUTE reports	Speed survey using the same vehicle, during rainy season	AGEROUTE
Paved roads under maintenance	Maintenance of the Dianra-Tienengboue road after works completion	Annual	AGEROUTE Quarterly report	Long-term maintenance OPBRC signed and under execution	AGEROUTE
Rural roads maintained with FER financing under the project	Measures the total length of roads maintained (in good condition) under the project	Annual	Supervision Engineers' progress reports / AGEROUTE Quarterly reports	Total length of roads maintained (in good condition) under the project	AGEROUTE

Maintenance contract signed for Dianra-Bouandougou-Bouake Road	A maintenance contract financed by FER and consistent with the Road Maintenance Strategy	one time	AGEROUTE project progress report	Government will provide evidence of the signing and entry into execution of one or multiple long-terms contracts for the maintenance the paved roads improved under the project.	AGEROUTE
Mini-storage facilities used by female entrepreneurs in improved markets (percentage)	Proportion of newly constructed storage facilities that are leased out to women entrepreneurs, or mainly used by women	Annual	Supervision Engineer's reports	Share of mini-storage facilities leased out to women mainly used by women, on the total number of mini-storage facilities	Regional Councils
Trees planted	Trees planted under the project	Annual	Supervision Engineers' progress reports / SODEFOR's Quarterly reports	Total number of trees planted along the roads and in village groves in the 11 regions	
Rural schools and health centers with improved conditions	Schools and health centers with reception conditions improved under the project	Annual	Supervision Engineers' progress reports / Regional Councils Quarterly reports	Total number of schools and health centers with reception conditions (water, hygiene, electricity, toilets) improved under the project in non-communalized	Regional Councils

				territories	
Women's group supported with IMTs	Women's groups associated to rural markets and/or agricultural production collection points receiving support from the project	Annual	PCU progress reports	Total number of women's groups associated to rural markets and/or agricultural production collection points to be developed which have receive IMTs	PCU
Rural road's strategy adopted	Adoption of a rural road's strategy, including at least (i) a programing framework and (ii) institutional arrangements	One time	Official statement approving the strategy	Strategy prepared in 2018 to be finalized, based on proposals made in the ASA on rural connectivity	MEER
Rural road's pluriannual priority investment program adopted	A priority investment program (PIP) covering at least 3 years is prepared	One time	Official statement approving the PIP	The PIP is prepared based on the strategy adopted.	MEER
Road maintenance strategy adopted	Strategy based on FER's current revenues	One time	Official statement approving the strategy	Finalization based on the strategy financed by EU, but tailored to available resources	MEER
Road Maintenance Program adopted	Pluriannual Priority Maintenance Program (PMP)	One time	Official statement approving the PMP	PMP prepared based on the strategy adopted and based on FER's current revenues	MEER

Improved institutional oversight capacity in the roads sector	Assessed by the development and application of an AGEROUTE performance framework	Annual	Performance matrix developed by MEER, negotiated with AGEROUTE and adopted	The MEER will develop an agency performance framework that includes a performance agreement, performance KPI's, and methods of assessing AGEROUTE's performance. The indicator measures whether the framework is prepared and effectively adopted.	MEER
Female beneficiaries of capacity building activities	Women receiving building capacity activities	Quarterly	Quarterly reports	Women having participated in at least one capacity building activity (specific training, traineeship, etc. in medium or high skills jobs)	PCU
Graduates who report being employed 12 months after they complete internship which are women (percentage)	Share of women in the internship program that report being hired to perform STEM related jobs one year after participating in the internship program	Annual	Capacity Building Program Consultant	Surveys of each annual batch of female interns	PCU
Road safety audit recommendations addressed	Road safety recommendations addressed	Annual	Road safety audits	Number of recommendations addressed divided by the total number of recommendations	OSER, from subsequent road safety audits

Road safety audits conducted	Road safety audits carried out on selected unpaved road sections	Annual	Road safety audits reports	Number of rural road sections (cumulative) audited after works completion (2 sections maintained and 2 sections rehabilitated per region per year).	OSER
Meteorological facilities rehabilitated / constructed in the selected regions	Number of additional meteorological facilities rehabilitated / constructed in the selected regions financed by the project	Annual	Supervision Engineers' progress reports / SODEXAM Q uarterly reports	Number of facilities constructed / rehabilitated and maintained by SODEXAM	SODEXAM
Complaints addressed timely	Complaints processed according to the GRM	Quaterly	Quarterly Reports	Number of complaints received and processed in the indicated timeframe divided by the total number of complaints received	PCU
Technical audits conducted	Works audits carried out on selected works contracts	Annual	Audits reports	Number of contracts (cumulative) audited: every year, at least 2 road maintenance contracts, 2 road rehabilitation contracts, 4 works contracts on non-	PCU

				strategic roads and 5 works contracts under component 2.	
Results and key recommendations of feedback and beneficiary surveys incorporated into project activities	Percentage of key recommendations from feedback and beneficiaries surveys on road maintenance activities addressed	Quarterly	Feedback received through the GRM and periodic beneficiaries surveys	Number of key recommendations from feedback and beneficiaries surveys considered in road maintenance activities, divided by the number of key recommendations from feedback and beneficiaries surveys	CC-PRICI

Performance-Based Conditions Matrix

PBC 1	Rural road's strategy adopted			
Type of PBC	**Scalability**	**Unit of Measure**	**Total Allocated Amount (USD)**	**As % of Total Financing Amount**
Intermediate Outcome	No	Yes/No	18,170,000.00	5.25
Period	**Value**		**Allocated Amount (USD)**	**Formula**
Baseline	No			
December 2024	Yes		18,170,000.00	Under Sub-component 1.1a (rehabilitation of rural roads)
December 2025	Yes		0.00	-

December 2026	Yes		0.00	-
December 2027	Yes		0.00	-

PBC 2	Rural road's pluriannual priority investment program adopted			
Type of PBC	**Scalability**	**Unit of Measure**	**Total Allocated Amount (USD)**	**As % of Total Financing Amount**
Intermediate Outcome	No	Yes/No	18,170,000.00	8.75
Period	**Value**		**Allocated Amount (USD)**	**Formula**
Baseline	No			
December 2024	No		0.00	-
December 2025	Yes		18,170,000.00	Under Sub-component 1.1a (rehabilitation of rural roads)
December 2026	Yes		0.00	-
December 2027	Yes		0.00	-

PBC 3	Road maintenance strategy adopted			
Type of PBC	**Scalability**	**Unit of Measure**	**Total Allocated Amount (USD)**	**As % of Total Financing Amount**
Intermediate Outcome	No	Yes/No	5,190,000.00	7.00
Period	**Value**		**Allocated Amount (USD)**	**Formula**
Baseline	No			
December 2024	Yes		5,190,000.00	Under Sub-component 1.1b (Dianra-Bouandougu-Bouake road)

December 2025	Yes		0.00	-
December 2026	Yes		0.00	-
December 2027	Yes		0.00	-

PBC 4	Road Maintenance Program adopted			
Type of PBC	**Scalability**	**Unit of Measure**	**Total Allocated Amount (USD)**	**As % of Total Financing Amount**
Intermediate Outcome	No	Yes/No	20,770,000.00	7.00
Period	**Value**		**Allocated Amount (USD)**	**Formula**
Baseline	No			
December 2024	No		0.00	-
December 2025	Yes		20,770,000.00	Under Sub-component 1.1b (Dianra-Bouandougu-Bouake road)
December 2026	Yes		0.00	-
December 2027	Yes		0.00	-

PBC 5	Maintenance contract signed for Dianra-Bouandougou-Bouake Road			
Type of PBC	**Scalability**	**Unit of Measure**	**Total Allocated Amount (USD)**	**As % of Total Financing Amount**
Output	No	Yes/No	20,770,000.00	7.00
Period	**Value**		**Allocated Amount (USD)**	**Formula**
Baseline	No			
December 2024	No		0.00	-

December 2025	No	0.00	-
December 2026	Yes	20,770,000.00	Under Sub-component 1.1b (Dianra-Bouandougu-Bouake road)
December 2027	Yes	0.00	-

PBC 6	Rural roads maintained with FER financing under the project			
Type of PBC	**Scalability**	**Unit of Measure**	**Total Allocated Amount (USD)**	**As % of Total Financing Amount**
Intermediate Outcome	Yes	Kilometers	15,580,000.00	4.06
Period	**Value**		**Allocated Amount (USD)**	**Formula**
Baseline	0.00			
December 2024	0.00		0.00	Nothing
December 2025	1,000.00		1,040,000.00	Under Sub-component 1.1a (rehabilitation of rural roads)
December 2026	3,000.00		3,120,000.00	Under Sub-component 1.1a (rehabilitation of rural roads)
December 2027	11,000.00		11,420,000.00	Under Sub-component 1.1a (rehabilitation of rural roads)

Verification Protocol Table: Performance-Based Conditions	
PBC 1	Rural road's strategy adopted
Description	The strategy should include at least the following elements: (i) definition and/or categorization of rural roads; (ii) institutional framework (clarification of responsibilities between MEER, MINADER, Regional Councils and all other stakeholders including Agricultural professions); (iii) technical standards; (iv) financing sources and (v) programming framework (prioritization criteria).
Data source/ Agency	Statement from the Council of Ministers
Verification Entity	Verification Agent
Procedure	A draft strategy (i) is prepared and discussed with technical and financial partners, and thereafter (ii) presented to the Council of Ministers.
PBC 2	Rural road's pluriannual priority investment program adopted
Description	The Priority Investment Program (PIP - minimum 4 years) should include at least the following elements, based on the programming framework defined by the strategy adopted: (i) summary of the programming framework; (ii) list of rural road sections to be rehabilitated/improved per region/year; (iii) indication of financing sources.
Data source/ Agency	AGEROUTE, with assistance of a Consultant
Verification Entity	Verification Agent
Procedure	The PIP is (i) prepared with the association of all stakeholders and (ii) approved through a decision of the minister in charge of roads.
PBC 3	Road maintenance strategy adopted
Description	The strategy will entail at least the following dimensions: (i) defining a programming process for better targeting interventions to maximize the impact; (ii) regulations systematizing maintenance and protecting assets, and adjusting interventions to better align with the financial resources available; (iii) institutional framework, to clarify responsibilities between the various ministries, regional councils, districts, municipalities and the private sector (agricultural professions); (iv) increasing the mobilization of resources for maintenance, including by better structuring the private sector contribution.

Data source/ Agency	Statement from the Council of Ministers
Verification Entity	Verification Agent
Procedure	A draft strategy (i) is prepared and discussed with technical and financial partners, and thereafter (ii) presented to the Council of Ministers.
PBC 4	Road Maintenance Program adopted
Description	The Priority Maintenance Program (PMP - minimum 3 years) should include at least the following elements, based on the programming framework defined by the strategy adopted: (i) summary of the programming framework; (ii) list of national road sections to be maintained; (iii) length or rural road section to be maintained per region; and (iv) indication of financing sources.
Data source/ Agency	AGEROUTE, with assistance of a Consultant
Verification Entity	Verification Agent
Procedure	A PMP is (i) prepared in association with all stakeholders and (ii) approved through a decision of the minister in charge of roads.
PBC 5	Maintenance contract signed for Dianra-Bouandougou-Bouake Road
Description	This PBC is relating to the signing of a contract for the maintenance of the Dianra-Bouandougou-Bouake after construction/rehabilitation, financed by FER and consistent with the Road Maintenance Strategy
Data source/ Agency	AGEROUTE
Verification Entity	Verification Agent
Procedure	Government will provide evidence of the signing and entry into execution of one or multiple long-terms contracts for the maintenance the paved roads improved under the project.

PBC 6	Rural roads maintained with FER financing under the project
Description	This PBC is regarding the yearly routine maintenance program financed by FER under subcomponent 1.2, which covers strategic roads rehabilitated under the project (under subcomponent 1.1a) starting 2025 and all strategic roads planned for maintenance under the project starting 2027.
Data source/ Agency	Supervision Engineers' reports providing road maps, photo/video confirmation of the before and after condition, contract information, maintenance history and expenditure details
Verification Entity	Verification Agent
Procedure	The achievement of targets will be verified each year and the corresponding disbursement made with the achievement of the condition relating to the length of strategic roads maintained at the right time (dry season) during the calendar year. This is a scalable condition, which allows flexibility of disbursement if the targets have been partially met. In the event that targets have not been fully met (i.e., downward scalability), the disbursement will be made on the basis of US$ 1,040 per kilometer of road meeting the condition (US2,000 including AIIB financing).

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ANNEX 1: Implementation Arrangements and Support Plan

1. Arrangements under Component 1. Activities under this component will be implemented by AGEROUTE for strategic roads, in association with regional councils for spot improvements on non-strategic roads. This includes: (a) preparing the work programs; (b) preparing ToRs and Draft Bidding documents for the activities included in their respective annual work plan; (c) contributing to bid evaluations and contracts negotiations/finalization; (d) overseeing the implementation of activities, monitoring progress, and reporting to the PCU.

2. Arrangements under Component 2. Activities under Component 2 will be handled by Implementing Agencies: (i) the rural mobility pilot operation will be piloted by the Ministry of Transport, (ii) SODEFOR for tree planting in villages and transhumance tracks in classified forests; and (iii) regional councils for other rural infrastructure (rural markets and agricultural produce collection points, investments in schools, health centers and small cities to improve social cohesion). Other stakeholders will be associated to the execution of these activities (such as Ministry of Animal Resources (*Ministère des Ressources Animales et Halieutiques*, MIRAH for activities relating to pastoral corridors, OCPV for rural markets and agricultural produce collection points, and local representatives of ministries in charge of education and health). RTUs will program and supervise the implementation of investments in close collaboration with the beneficiaries of each facility (Follow-up Committees).

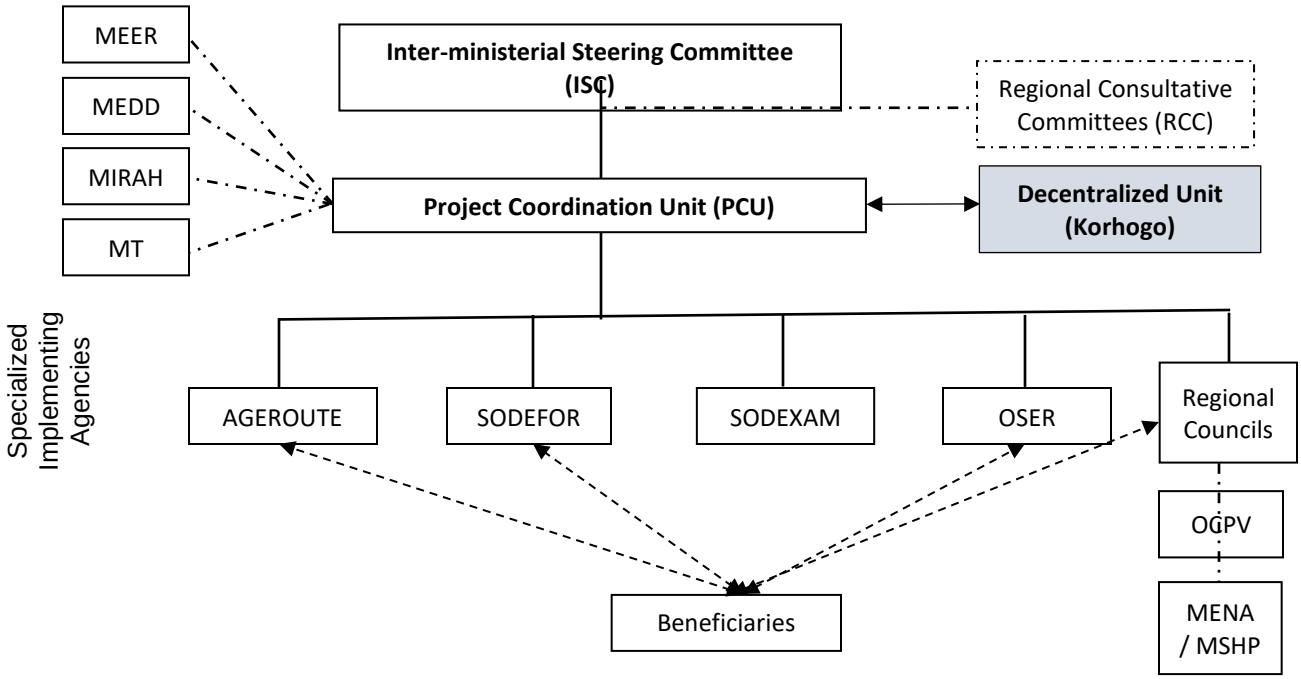
3. Arrangements under Component 3. Institutional support activities will be handled by beneficiary ministries and SIAs. Support to road management strategies will be handled by MEER, in collaboration with various relevant stakeholders. In this regard, a technical follow-up committee will be established. Road safety activities will be carried out by OSER and activities related to weather stations will be handled by SODEXAM. Capacity building activities will be directly handled by the PCU, in collaboration with various stakeholders including INP-HP, vocational centers and MEER.

4. Arrangement under Component 4. In support of the coordinating unit's efficient management of the project, this component covers financing for staff, operating costs, M&E, citizen engagement, including information and communication activities, and financial and technical audit costs. The PCU will (i) ensure coordination of overall project implementation; (ii) ensure availability of funds on time; (iii) maintain the books and accounts of project activities and produce financial reports; (iv) provide technical advice to the Regional Councils and other SIAs; and (v) monitor and evaluate implementation and impacts of the project; and report results to the PSC as well as the various stakeholders (central and local administrations, donors, and the civil society).

5. Arrangements under Component 5. Component 5 (CERC) will be implemented and coordinated by the coordinating Authority designated in the CERC Operations Manual, which shall set forth detailed implementation arrangements for the component, including: (i) definition of ToRs for, and resources to be allocated to the Coordinating Authority, the entity to be responsible for coordinating and implementing the component; (ii) specific activities that may be included in the component, eligible expenditures; (iii) FM arrangements; (iv) procurement methods and procedures for emergency expenditures to be financed under the component; (v) documentation required for withdrawals; (vi) environmental and social safeguards management frameworks consistent with the IDA's policies on the matter; and (vii) any other arrangements necessary to ensure proper coordination and implementation of the CERC. The detailed

arrangements and operations manual for CERC will be prepared during project implementation. The approval of the manual and compliance with procedures to induce the emergency response are conditions of disbursement on this component. The amount allocated will be deducted from the other project components and a restructuring of the project processed a posteriori.

Figure 1.2: Institutional Framework



6. Monitoring and Evaluation. The PCU will have overall responsibility to consolidate data and prepare bi-annual reports on the various components and activities, with contributions from evaluation reports, technical auditors, RTUs and TPM, according to the M&E plan as detailed in the project M&E manual. These reports will be submitted within 45 days from the end of each reporting period. These reports will detail the physical and qualitative progress of each activity in respect to the indicators of the Results Framework, as well as the financial execution of the activities. In addition, the report will include a summary of the implementation of the Environmental and Social Management Plans (ESMP) and Resettlement Action Plans (RAP) as well as any issues and remedies proposed to address them. Technical and environmental audits will be carried out every year to assess the quality, use, and maintenance of the infrastructure works and the application of ESMPs and remedies, and to give recommendations for the further implementation of the project. Before the mid-term review and before the end of the project, a beneficiary assessment will also be conducted to inform implementation. The project M&E manual will include the project Results Framework but also several project management and impact indicators. The baselines of the Results Framework have been established through the studies conducted during project preparation.

7. Budgeting arrangements. With input from all implementing entities, CC-PRICI will prepare a budgeted annual action plan. The process will be detailed, and sample reports will be included in the PIM.

Not later than November 30 of the year preceding the year to which the work plan applies, it will first be submitted to the PSC for approval and then to IDA to ensure there is no objection.

8. Accounting standards, policies, and procedures. The prevailing accounting policies and procedures will apply. These are aligned with the accounting standards for West African Francophone countries—SYSCOHADA—which are in use in Côte d'Ivoire for current World Bank-financed operations. The new project's accounting systems, policies, and financial procedures will be documented in the PIM. The PCU will customize the existing accounting software to meet the new project requirements.

9. Internal controls and audits. The internal control policies and procedures will be documented in the PIM which will be updated and adopted before project effectiveness. In line with the new Decree No. 475 governing how donor-financed projects will operate in Côte d'Ivoire, the IGF will oversee the project internal audit function, managed by the PCU. The existing government internal controls systems in place including the use of budget controllers and separation of duties between the administrative phase of budget execution and the accounting phase of public expenditure channel will be used for the purposes of this project.

10. Transparency, accountability and anti-corruption efforts will be encouraged including via a complaint handling mechanism; a communication strategy to inform the public through the media on all aspects of the project; and the publication on the implementing entity or government websites of budgets, financial reports and audited financial statements. CC-PRICI will also have to deal with fraud and anti-corruption in accordance with the World Bank Anti-Corruption Guidelines referred to in the Financing Agreement**.**

11. Flow of funds and disbursements arrangements. A designated account (DA) will be opened for disbursement purposes at the Central Bank of West African States (Banque Centrale des Etats de l'Afrique de l'Ouest, BCEAO). A project account (PA), managed by the public accountant assigned to the CC-PRICI, opened in a reputable commercial bank under conditions acceptable to the World Bank, will be used to pay expenditures. The Project Account will be managed by CC-PRICI. Cash withdrawal transactions from the Operational Account will be authorized respectively by the Project Coordinator and the project's FM Specialist. In the regional coordination delegation based in Korhogo, a ''regisseur'' under responsibility of project public accountant will be made payments.

12. Disbursements will be made in accordance with the Disbursement Guidelines for IPF dated February 2017. Once the credit becomes effective, Disbursements of IDA funds will be transaction-based disbursements. The ceiling of the DA will be stated in the Disbursement and Financial Information Letter (DFIL). An initial advance up to the DA ceiling will be made and subsequent disbursements will be made against submission of an SoE reporting on the use of the previous advance. The option to disburse against submission of quarterly unaudited IFRs (also known as report-based disbursements) could be considered once the project meets the criteria. Other methods of disbursing funds (reimbursement, direct payment, and special commitment) will also be available. The minimum value of applications for these methods is 20 percent of the DA ceiling. The project will sign and submit Withdrawal Applications electronically using the eSignatures module accessible from the World Bank's Client Connection website.

13. **Financial reporting arrangements.** CC-PRICI will prepare quarterly un-audited IFRs in form and content satisfactory to the World Bank, which will be submitted to the World Bank within 45 days after the end of the period to which they relate.

14. **External audit.** An external independent and qualified private sector auditor will be recruited to carry out the audit of the Project's financial statements. The audit report on the annual project financial statements and activities of the DA shall be submitted to the World Bank within six (6) months of the end of each fiscal year.

15. The conclusion of the assessment is that the FM arrangements in place meet the World Bank's minimum FM requirements under World Bank IPF Policy and Directive, and subject to the implementation of the FM action plan agreed with the Recipient, are therefore adequate to provide, with reasonable assurance, accurate and timely information on the status of the project required by World Bank. The project's FM residual risk of the project is assessed as Moderate.

16. **Implementation Support Plan.** The World Bank team, together with AIIB, will conduct semi-annual Implementation Supervision Missions jointly with the GoCI and key stakeholders to assess the status of project progress and outcomes, ensure compliance with legal covenants, and provide recommendations to keep the project on track toward achieving its PDO. The missions will include field visits to allow the government and World Bank to assess and discuss project progress with beneficiaries. In areas not accessible to World Bank teams because of security threats, World Bank-financed TPM will be mobilized. In addition to missions, bi-monthly or monthly follow-up meetings will be organized with the PCU to assess progress on key activities. A Mid-Term Review will be conducted no later than May 31, 2026 to review progress and, if necessary, adjust project design. A final independent evaluation will be conducted in the last year of project implementation to assess overall achievement of expected outcomes and draw lessons. An Implementation Completion and Results Report will be prepared by GoCI and the World Bank team within six months after the project closes to assess its achievements.

ANNEX 2: Performance-Based Conditions

PBCs 1 and 2 on: "Rural Road's Strategy Adopted" and "Rural Road's Pluriannual Priority Investment Program Adopted"

1. **Rationale.** Under Subcomponent 1.1a on Rural roads rehabilitation, disbursement conditions are introduced in order to support GoCI's aims to finalize and adopt a relevant rural roads strategy. This new strategy will fine tune the one prepared in 2018 and current practices by: (i) better targeting interventions to maximize the impact on human capital and rural economy; (ii) adjusting levels of service to better align with the financial resources available; (iii) systematizing maintenance activities and ensuring a better balance between investment and maintenance; and (iv) increasing the mobilization of resources for maintenance, including by better structuring the private sector contribution.The strategy will also include resilience against security hazards, and would entail three dimensions: (i) improving the programming process; (ii) systematizing maintenance and protecting assets; and (iii) revising the institutional framework to clarify responsibilities between the various ministries, regional councils and the private sector (agricultural professions). This will pave the way for the preparation and adoption of a clear and sound priority investment program covering the interventions of all stakeholders.

2. **Disbursements.** The achievement of targets will be verified in 2024 and 2025, and disbursements made with the achievement of the following conditions: (i) preparation and adoption of a rural road's strategy (2024); and (ii) preparation and adoption of a pluriannual investment program (2025), based on the adopted strategy. The Disbursement Value is set at a total of US$70 million equivalent IDA (US$35 million equivalent for each condition, of which US$18.170 million equivalent IDA). Given that these PBCs are critical for the sustainability of the project and the rural roads subsector, non-compliance in the expected timeframe will entitle the World Bank to cancel the associated amount.

PBCs 3, 4 and 5: "Road Maintenance Strategy Adopted", "Road Maintenance Program Adopted" and "Contract for the Maintenance of the Dianra-Bouandougou-Bouake Road Signed"

3. **Rationale**. Under Subcomponent 1.1b on roads to be paved, Performance Conditions are introduced in order to support GoCI's aims to develop and adopt a relevant road maintenance strategy. The rural roads strategy will include resilience against security hazards and will entail three dimensions: (i) improving the programming process; (ii) systematizing maintenance and protecting assets; and (iii) revising the institutional framework to clarify responsibilities between the various ministries, regional councils, districts, municipalities and the private sector (agricultural professions).This strategy is aimed at: (i) better targeting interventions to maximize impact; (ii) adjusting interventions to better align with the financial resources available; (iii) systematizing maintenance activities; and (iv) increasing the mobilization of resources for maintenance, including by better structuring the private sector contribution.

4. **Disbursements**. The achievement of targets will be verified each year and disbursements made with the achievement of the following conditions: (i) preparation and adoption of a road maintenance strategy (2024); (ii) preparation and adoption of a pluriannual maintenance program (2025), based on the adopted strategy; and (iii) and signing of a contract for the maintenance of the Dianra-Bouandougou-Bouake road after construction, based on the road maintenance strategy. The Disbursement Value is set at a total of US$90 million equivalent (of which US$46.73 million equivalent IDA). Given that these PBCs

are critical for the sustainability of the project and road sector, non-compliance in the expected timeframe will entitle the World Bank to cancel the associated amount.

PBC 6: Rural Roads Maintained under the Project with FER's Financing

5. **Rationale**. Under Component 1.1a on Rural roads rehabilitation, this Performance Condition is intended in order to support GoCI's aims to move towards a systematic maintenance approach. The condition is intended to ensure that the rehabilitated roads are effectively maintained subsequently under the project. The routine maintenance program under Subcomponent 1.2 will cover all strategic roads already rehabilitated/improved, including additional road sections improved under Subcomponent 1.1. This program will include a total of about 73,000 km cumulatively maintained over the life of the project, broken into incrementally increasing annual targets of kilometers of road maintained in good and fair condition. IDA will finance the first triennial maintenance program (2004-2026 - about 7,800 kilometers per year). GoCI, through the FER, will finance the 2007-2029 triennial maintenance program and the roads rehabilitated under Component 1 starting 2025 (to cover about 49,800 kilometers in total). This will allow more time to achieve the objectives of the reform of the FER and road maintenance.

6. **Disbursements.** The achievement of targets will be verified each year and disbursements made with the achievement of the conditions regarding the length (total) of strategic roads maintained during each year (during the dry season) starting 2025. The achievement of targets will be verified at the end of each 12-month period based on Supervision Engineers' reports providing road maps, photo/video confirmation of the before and after condition, contract information, and maintenance history and expenditure details. The Performance Conditions Value is set at a total of US$30 million equivalent (of which US$15.58 million equivalent from IDA), which represents around 22.8 percent of the expected expenditure for rural roads rehabilitation under the project (Subcomponent 1.1a). This is a scalable DC Performance Condition, which allows flexibility of disbursement if the targets have been partially met. If targets have not been fully met (i.e., downward scalability), the disbursement will be made in proportion to the degree of achievement of the result linked to the condition (with the formula US$2,000 per kilometer of road effectively maintained, of which US$1,040 IDA). The credit amount of the unachieved part of the condition in the envisioned timeframe will be cancelled.

Table 2.1: PBCs Allocations by Project Funds Sources

Subcomponent	PBC	Amount (US$)		
No	No	Total	World Bank	AIIB
1.1a Rural roads rehabilitation	1. Rural Road's Strategy Adopted in 2024	35,000,000	18,170,000	16,830,000
	2. Rural Road's Priority Investment Program Adopted in 2025	35,000,000	18,170,000	16,830,000
	6.a Road Maintenance under FER Financing (1,000 km in 2025)	2,000,000	1,040,000	960,000
	6.b Road Maintenance under FER Financing (3,000 km in 2026)	6,000,000	3,120,000	2,880,000
	6.c Road Maintenance under FER Financing (11,000 km in 2027)	22,000,000	11,420,000	10,580,000
	Subtotal	100,000,000	51,920,000	48,080,000
	3. Road Maintenance Strategy Adopted in 2024	10,000,000	5,190,000	4,810,000

Subcomponent	PBC	Amount (US$)		
No	No	Total	World Bank	AIIB
1.1.b Roads upgrading (pavement)	4. Road Priority Maintenance Program Adopted in 2025	40,000,000	20,770,000	19,230,000
	5. Maintenance Contract for Dianra-Bouandougou-Bouake Road Signed	40,000,000	20,770,000	19,230,000
	Subtotal	90,000,000	46,730,000	43,270,000
Total		**190,000,000**	**98,650,000**	**91,350,000**

Table 2.2: Annual Targets for the PBCs

PBC	Baseline	Annual targets			
	2023	December 2024	December 2025	December 2026	December 2027
PBC 1. Rural Road's Strategy Adopted	No clear strategy for rural roads	A rural road's strategy is prepared and adopted			
US$35,000,000		US$35,000,000			
PBC 2. Rural Road's Pluriannual Priority Investment Program Adopted	No clear investment program for rural roads		A national pluriannual investment program is prepared based on the strategy and adopted		
US$35,000,000			US$35,000,000		
PBC 3. Road Maintenance Strategy Adopted	No clear strategy for road maintenance	A national road maintenance strategy is prepared and adopted			
US$10,000,000		US$10,000,000			
PBC 4. Road Maintenance program Adopted	No clear program for road maintenance		A national pluriannual maintenance program is prepared based on the strategy, and adopted		
US$40,000,000			US$40,000,000		
PBC 5. Maintenance Contract for Dianra-Bouandougou-Bouake Road Signed	Road not maintained			A contract is signed for the maintenance of the Dianra-Bouandougou-Bouake road	
US$40,000,000				US$40,000,000	
PBC 6. Rural roads financed by FER	No maintenance of rural roads		1,000 km[64] maintained under FER financing	3,000 km[65] maintained under FER financing	11,000 km[66] maintained under FER financing
US$30,000,000			US$2,000,000	US$6,000,000	US$22,000,000
US$190,000,000		**US$45,000,000**	**US$77,000,000**	**US$46,000,000**	**US$22,000,000**

[64] It is planned to have about 1,700 km of roads rehabilitated under the project by end 2024, to be maintained under FER financing in 2025.
[65] About 4,000 km of roads rehabilitated under the project by 2025, to be maintained under FER financing in 2026.
[66] About 15,250 km to be maintained under FER financing starting 2028 (7,800 of the 1st triennial maintenance program + 7.450 of additional roads rehabilitated under the project).

ANNEX 3: Climate Adaptation and Mitigation

Climate Change Vulnerability Context

1. Ranked 144th out of 169 countries on the ND- GAIN index, Côte d'Ivoire is among the most vulnerable countries to climate change[67] due to its geographic location, economic structure and low preparedness. The northern regions of Côte d'Ivoire are principally characterized by a savanna landscape and a unimodal wet season from April/May to October, with yearly precipitation between 800 and 1,300 mm, as well as a wide range of average temperatures. Some other areas, mainly in southern and eastern regions of the project, pertain to a different climate zone, with forest and savanna vegetations and two wet seasons from March to May/June and August/September to October/November, with yearly precipitation of around 1,300 mm[68].

2. The road network is particularly subject to climate impacts, through more frequent extreme climate events in the northern regions that are compounded by climate change, such as flooding and drought. Despite limited available data, important precipitation events have repeatedly led to flooding and specifically to flash floods and landslides that destroy or damage both dirt and paved roads and cause significant disruptions across the network. On average, 16 percent of the road network of the 11 regions is exposed to floods (located in the 20-year flood zone). Extreme heat can alter, deform and make bitumen melt, thus leading to temporarily impassable roads, shorter roads' lifespan if not well-maintained, and the release of noxious pollutants. Prolonged drought also increases the risk of wildfires which could damage infrastructure, crops and biodiversity as well as hinder accessibility and connectivity, and therefore widen inequalities and generate poverty. At the country level, climate change threatens to push nearly one million more people into extreme poverty.

3. Additional external vulnerability factors such as the receding of traditional vegetation, deforestation, and the depletion of aquifers further aggravate impacts from climate events. Aquifers and vegetation contribute to stabilizing soils, fostering water infiltration and storing and sequestrating carbon; their deterioration leads to higher risks of erosion, landslides, road subsidence and worsened flooding. Drought and decreasing vegetation will contribute to an estimated increase in the area of arid and semi-arid lands by 5 to 8 percent on the African continent by 2080.

Project Climate Co-Benefits Contributions

4. The project will contribute to climate adaptation and mitigation objectives, leading to a reduction of 3,092,467 tCO_2 during the economic life of the project. Emissions savings are generated from tree planting activities and the improvement of traffic flows as a result of road rehabilitations.

5. **Under Component 1**, non-strategic rural roads will be selected for spot improvement based on their criticality for connectivity and their vulnerability to flooding. On strategic roads, climate resilience measures will be deployed, such as the construction and rehabilitation of culverts and submersible slabs,

[67] Côte d'Ivoire 2nd Nationally Determined Contribution, 9 May 2022. URL: *https://unfccc.int/sites/default/files/NDC/2022-06/CDN_CIV_2022.pdf*

[68] Roads For Inclusive and Resilient Access to Basic Socio-Economic Facilities in Northern Côte d'Ivoire - A new approach for enhancing human capital and economic development through inclusive, equitable and sustainable connectivity, 2021

the creation of drainage and the waterproofing of roadways, including the upgrading of the Dianra-Bouandougou road and rehabilitation of Bouandougou-Bouake road to enhance its resilience to extreme rainfall and flooding events and ensure that it is passable in all seasons. Particular attention will be paid to crossing points in Sahelian regions where rivers are seasonal and without defined paths and where submersible structures are more suitable to avoid damage. Component 1 will also incorporate the concept of "Green Roads for Water," which involves improving water management to protect roads while using the roads to collect water.[69] Under Component 1, the project will also strengthen periodic and routine maintenance, observing climate resilience considerations such as timely maintenance and repair of roads, passage points, and drainage systems as to ensure year-round road connectivity, even in the aftermath of extreme weather events.

6. **Under Component 2**, the project will support the consolidation of the agricultural logistics chain through the development of rural markets, selected based on locations that have low exposure to flooding and that are accessible by road all year round. The markets' energy needs will be satisfied by solar energy. Component 2 will also support the rehabilitation of transhumance corridors and tracks, contributing to forest protection from animal attacks, and will include features like waterholes and pastures which are important to ensure resilience during extreme heat events. Furthermore, Component 2 will support tree planting activities to mitigate the impact of bush fires and contribute to the objective under the National Climate Change Program of reforesting 20 percent of the territory by 2030. Afforestation will be done along roads, schools, health centers, bodies of water, and other locations, helping to mitigate the impact of extreme heat in communities. Component 2 will also support social infrastructure and services like schools and health centers that will benefit from electricity from solar energy.

7. **Under Component 3**, the project will provide capacity building and institutional support for project implementation. TA will be provided to facilitate the planning and deployment of bioengineering and nature-based solutions to enhance the climate resilience of the transport sector. Component 3 will also support the rehabilitation and densification of meteorological facilities to strengthen weather and climate relevant information systems and capabilities.

[69] "Green Roads for Water," Road Infrastructure Guidelines for Water Management and Climate Resilience. World Bank Group, 2021.

Table 3.1: Component-wise Climate Co-Benefits from Adaptation and Mitigation

Component	Subcomponent	Climate risks	Climate related project interventions	Financing
Component 1: Inclusive and Resilient Rural Connectivity Infrastructure (US$449.1 million equivalent, of which US$196.2 million from IDA, US$181.7 million from AIIB and US$71.2 million from GoCI)	Sub- 1.1: *Rehabilitation and Upgrading of Strategic Roads to Climate-Resilient Standards*	Flooding, intense precipitation events and extreme heat exacerbate the problems of rural connectivity, causing significant and recurrent road damage and disruptions across the network Flooding, intense precipitation events and extreme heat Flooding, intense precipitation events and extreme heat	The rehabilitation and upgrading of dirt and paved strategic roads will be conducted to climate resilience standards, to reduce the risk of damage from extreme heat, flooding and erosion. This includes upgrading of the Dianra-Bouandougou road and rehabilitation of the Bouandougou-Bouake road to enhance resilience to extreme rainfall and flooding events and ensure that it is passable in all seasons. Measures include adapting the design of the road and using appropriate construction materials and techniques to withstand extreme heat, flooding, and erosion. Following the Green Roads for Water approach, a particular emphasis will be given to flood risk mitigation and water management solutions, by waterproofing roadways, improving drainage and groundwater recharge. Adaptation measures include building small stormwater ponds and retention basins to capture runoff and thus reduce damage to the road and structures, roadside vegetation planting, converting borrow pits for storage, infiltration, or groundwater recharge, and limiting traffic during and after rain events through rain barriers. In addition, roads in good condition slow down the wear and tear of vehicles and the increased average speeds result in lower fuel consumption and consequently in lead to a reduction in CO_2 emissions, thus supporting climate change mitigation. Furthermore, roads will include provisions for non-motorized transport like sidewalks and zebra crossings, when crossing community areas.	*US$294.8 million, of which US$153.1 million from IDA and US$141.7 million from AIIB*
	1.2: Periodic and Routine Climate-Resilient Maintenance of the Strategic Network		Road maintenance is key to ensuring the network's sustainability as well as permanent access to services and essential facilities to remote areas. It will be conducted to climate resilience standards and following the Green Roads for Water recommendations, to reduce vulnerability to climate hazards such as floods, heavy rains, erosion, and drought, thus contributing to climate adaptation. Well-maintained roads also support climate change mitigation by reducing GHG emissions thanks to increased speeds.	*US$127.5 million, of which US$29.3 million from IDA, US$27.0 million from AIIB and US$71.2 million from GoCI*
	1.3: Spot Climate-resilient Improvement of Non-Strategic Network		Spot improvements in non-strategic network to address climate risks like heavy precipitation and flooding, and will contribute to climate resilience of the road assets, road network and communities served (reduction of traffic disruptions and loss of connectivity). Interventions will be mainly on roads classified as "impassable" and will focus on the rehabilitation of crossing structures (bridges and culverts). Sections for intervention will be determined based	*US$26.8 million, of which US$13.9 million from IDA and*

Component	Subcomponent	Climate risks	Climate related project interventions	Financing
			on an analysis of the climatic vulnerability (level of risk/duration of flooding), of the long-list roads identified by the Regional Councils, in cooperation with the agricultural professions and AGEROUTE.	*US$12.9 million from AIIB*
Component 2: Rural Socio-economic infrastructure (US$76.0 million equiavlent, of which US$63.5 million from IDA and US$12.5 from AIIB)	*2.1: Consolidation of the Agricultural Logistics Chain*	Flooding, intense precipitation events, drought, extreme heat impact rural infrastructure such as market facilities, the travel of livestock and herders, and access to markets and agriculture production collection points.	The building and rehabilitation of rural markets facilities and warehouses will reduce local farmers' vulnerability to harsh climate conditions which damage products (such as heat and flooding), therefore reducing post-harvest losses and reinforcing climate change resilience. Considerations of climate resilience in the design of market facilities and warehouses and in the selection of materials to make these facilities naturally cooler, elevated construction to protect against flooding, etc. Priority will be given to low-carbon solutions – such as the use of solar energy for lighting and product conservation –, hence contributing to climate change adaptation and mitigation.	*US$26.2 million, of which US$13.6 million from IDA and US$12.6 million from AIIB*
	2.2: Improvement of Pastoral Connectivity – Rehabilitation of Transhumance Corridors and Tracks		The development of a classified forests management plan and the rehabilitation of transhumance corridors and tracks will contribute to climate adaptation and mitigation by supporting the conservation of forests and biodiversity. Forests are key to carbon capture, sequestration and storage; hence, this activity contributes to mitigation. Furthermore, the forest management plan and the rehabilitation of transhumance corridors will enhance the climate resilience of herders and livestock through the provision of water points, fodder plots, livestock channeling hedges, shelters and night parks along the corridors. The definition of corridors outside classified forests will consider flooding and extreme heat risks and will enhance through the provision of water points, grazing areas, among other facilities to enhance climate resilience.	*US$6.0 million from IDA*
	2.3: Tree Planting end Environmental Education		Planting trees will support climate change resilience and adaptation by reducing erosion and related additional risks such as flooding, reducing heat, helping in stabilizing the grounds, and contributing to the protection and ampliation of selected areas and forests. Trees also largely contribute to climate change mitigation by sequestrating and storing CO_2. The 2,813 hectares that will be planted by the project will result in an estimated reduction of about 30,000 tons of CO_2 each year.	*US$5.2 million from IDA*
	2.4: Strengthening Social Cohesion through Support to Social Services		Social cohesion activities will focus on increasing mobility and accessibility by rehabilitating regularly flooded and eroded roads and improving drainage, and on sustainable and low-carbon materials and technologies – such as solar energy for lighting –, thus contributing to climate change resilience mitigation.	*US$37.5 million from IDA*
	2.5: Support to		The rural mobility strategy will incorporate climate resilience considerations and will consider	*US$1.1 million*

Component	Subcomponent	Climate risks	Climate related project interventions	Financing
	Rural Mobility		the situation of Women, linked to specific vulnerabilities to access to markets and agricultural production collection points. The rural mobility strategy will also consider how to improve facilities for non-motorized transportation (pedestrians, cyclists) and public transport.	*from IDA*
Component 3: Capacity Building, Support to the Institutional Framework and Sector Strategies, (US$11.8 million equivalent, of which US$6.1 million from IDA and US$5.7 million from AIIB)	*3.1: Capacity building and TA to works execution*	Lacking institutional capacity could impede mainstreaming of climate risk considerations in road planning, construction, maintenance – and deployment of climate resilience measures.	Capacity building of all concerned bodies (small enterprises, public authorities, supervision engineers...) is capital for ensuring the sustainability, maintenance, and resilience of the road network. Support to reforming road maintenance management will focus, among others, on climate change resilience and adaptation measures, including engineering, nature-based solutions, and hybrid solutions. TA to project implementation will also focus on the implementation of climate change adaptation and mitigation measures, in order to build an effective, sustainable and lasting road maintenance and rehabilitation program. Some of the climate resilience measures generate mitigation benefits (e.g.: tree planting).	*US$4.1 million, of which U$2.1 million from IDA and US$2.0 million from AIIB*
	3.2: Support to Road Sector Management		Supporting the development of road network planning and investment programming, M&E system, policies and the Road Maintenance Strategy, contributes to formally, systematically and concretely incorporate and foster climate resilience measures in the road sector management. Among these activities, the climate change action plan will directly target climate change risks and strategic responses.	*US$4.6 million, of which US$2.4 from IDA and US$2.2 million from AIIB*
	3.3: Support to Road Safety in Rural Areas	Pedestrians and cyclists are particularly vulnerable to road crashes. Road safety decreases with the occurrence of extreme weather events like heavy rainfall.	Road safety activities will target rural road users like pedestrians and cyclists, supporting non-motorized transportation. Road safety activities will consider climate and natural hazards risks and impacts on road and travel conditions and travel behavior.	*US$1.4 million, of which US$0.7 million from IDA and US$0.7 million from AIIB*

Component	Subcomponent	Climate risks	Climate related project interventions	Financing
	3.4: Support for the Climate agenda	Climate and the occurrence of natural hazards is projected to change with climate change.	The rehabilitation and densification of meteorological facilities in the project regions allow for better climate monitoring and data gathering, leading to better predictability and prompter actions to counter extreme climatic events and to adapt road management appropriately, hence contributing to climate change adaptation.	*US$1.7 million, of which US$0.9 million from IDA and US$0.8 million from AIIB*
Component 4: Support to Project Management (US$34.2 million equivalent IDA)	*4.1: TA to project coordination*	Lacking institutional capacity could impede project deployment.	Capacity building and management activities, including, among others, M&E and TAs, are critical to ensure the quality of services, of the infrastructure and of risks management. Among others, these activities will target climate change, disaster risk and road safety, thus enhancing climate resilience, adaptation and mitigation.	*US$14.3 million from IDA*
	4.2: M&E, Technical Audits			*US$4.1 million from IDA*
	4.3: Contribution to Project Management			*US$15.8 million from IDA*
Component 5: CERC (US$0.0)		Climate related natural hazards are expected to increase in the future with climate change.	The CERC enables rapid response to natural hazards related emergencies.	US$0.00 million