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Report No: PAD5224

INTERNATIONAL DEVELOPMENT ASSOCIATION

PROJECT APPRAISAL DOCUMENT

ON

A PROPOSED CREDIT

IN THE AMOUNT OF EUR 255.0 MILLION

(US\$280.0 MILLION EQUIVALENT)

OF WHICH US\$58.5 MILLION

FROM THE SCALE-UP WINDOW - SHORTER MATURITY LOAN

AND

A PROPOSED GRANT

IN THE AMOUNT OF SDR 37.2 MILLION

(US\$50.0 MILLION EQUIVALENT)

FROM THE WINDOW FOR HOST COMMUNITIES AND REFUGEES

TO THE

REPUBLIC OF CAMEROON

FOR AN

ENHANCING CONNECTIVITY AND RESILIENCE IN THE FAR NORTH OF CAMEROON FOR
INCLUSIVENESS PROJECT

MAY 25, 2023

Transport Global Practice
Western and Central Africa Region

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CURRENCY EQUIVALENTS

(Exchange Rate Effective April 30, 2023)

Currency Unit = Euro (EU),
Special Drawing Rights (SDR),
United States Dollar (US\$)

US\$1 = SDR0.742

US\$1 = EUR 0.910

FISCAL YEAR

January 1 - December 31

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ABBREVIATIONS AND ACRONYMS

ACE	Army Corps of Engineers
AfDB	African Development Bank
AM	Accountability Mechanism
AWPB	Annual Work Plan and Budget
CAA	Autonomous Sinking Fund – <i>Caisse Autonome d’Amortissement</i>
CAR	Central African Republic
CBA	Cost-Benefit Analysis
CEMAC	Economic and Monetary Community of Central Africa – <i>Communauté Economique et Monétaire de l’Afrique Centrale</i>
CERC	Contingent Emergency Response Component
COVID-19	Coronavirus Disease 2019
CPF	Country Partnership Framework
CPR-FC	Joint Financing Project Implementation Unit – <i>Cellule de Projets de Projets à Financements Conjoint</i>
CSO	Civil Society Organization
DHS	Demographic Health Survey
DSAT	Works Security Support Framework - <i>Dispositif Sécuritaire d’Accompagnement des Travaux</i>
E&S	Environmental and Social
EIRR	Economic Internal Rates of Return
ESHS	Environmental Social and Occupational Health and Safety
ESIA	Environmental and Social Impact Assessment
ESMF	Environmental and Social Management Framework
ESS	Environmental and Social Standards
EU	European Union
FCV	Fragility, Conflict and Violence
FM	Financial Management
FMA	Financial Management Assessment
GBV	Gender-Based Violence
GCRF	Global Crisis Response Framework
GDP	Gross Domestic Product
GEMS	Geo-Enabling Initiative for Monitoring and Supervision
GHG	Greenhouse Gas
GRS	Grievance Redress Service
HDM-4	Highway Development and Management Model – Version 4
IDA	International Development Association
IDF	Intensity-Duration-Frequency
IFR	Internal Financial Report
IPF	Investment Project Financing
ISA	International Standards on Auditing

km	Kilometers
LIPW	Labor-Intensive Public Work
LMP	Labor Management Procedures
LSP	Letter of Sector Policy
M&E	Monitoring and Evaluation
MDK	Mora-Dabanga-Kousseri
MINDEF	Ministry of Defense - <i>Ministère de la Défense</i>
MINEPAT	Ministry of Economy, Planning, and Regional Development – <i>Ministère de l'Économie, de la Planification, et de l'Aménagement du Territoire</i>
MINMAP	Ministry of Public Contracts – <i>Ministère des Marchés Publics</i>
MINTP	Ministry of Transport – <i>Ministère des Transports</i>
MINTP	Ministry of Public Works – <i>Ministère des Travaux Publics</i>
MNJTF	Multinational Joint Task Force
MTP	Multimodal Transport Project
NDC	Nationally Determined Contribution
ND-GAIN	Notre Dame Global Adaptation Initiative
NGO	Nongovernmental Organization
NPF	National Procurement Framework
NPV	Net Present Value
NSAG	Non-State Armed Group
OB DFA	Output-Based Disbursement Force-Account
OHADA	Organisation for the Harmonisation of Corporate Law in Africa - <i>Organisation pour l'Harmonisation en Afrique du Droit des Affaires</i>
OHS	Occupational Health and Safety
PDO	Project Development Objective
PIM	Project Implementation Manual
PIU	Project Implementation Unit
PLR	Performance and Learning Review
PPSD	Project Procurement Strategy for Development
PRA	Prevention and Resilience Allocations
PROLAC	Lake Chad Region Recovery and Development Project
PSRDREN	Special Reconstruction and Development Program for the Far North Region
RAI	Road Accessibility Index
RED	Road Economic Decision
RPF	Resettlement Policy Framework
RSSAT	Road Safety Screening and Assessment Tool
SDR	Special Drawing Rights
SEA	Sexual Exploitation and Abuse
SEP	Stakeholder Engagement Plan
SML	Shorter Maturity Loan
SORT	Systematic Operations Risk-Rating Tool

SSA	Sub-Saharan Africa
SSATP	Africa Transport Policy Program
STEP	Systematic Tracking of Exchanges in Procurement
SUW	Scale-up Window
TOR	Terms of Reference
TPM	Third-Party Monitoring
TSDP	Transport Sector Development Project
TTFP	Transport and Transit Facilitation Project
UN	United Nations
UNDSS	United Nations Department of Safety and Security
UNHCR	United Nations High Commissioner for Refugees
VOC	Vehicle Operating Costs
WBG	World Bank Group
WHO	World Health Organization
WHR	Window for Host Communities and Refugees
WP	Work Program

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DATASHEET

BASIC INFORMATION

Country(ies)	Project Name	
Cameroon	Enhancing Connectivity and Resilience in the Far North of Cameroon for Inclusiveness Project	
Project ID	Financing Instrument	Environmental and Social Risk Classification
P178207	Investment Project Financing	High

Financing & Implementation Modalities

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

Expected Approval Date	Expected Closing Date
20-Jun-2023	30-Jun-2029

Bank/IFC Collaboration

No

Proposed Development Objective(s)

The proposed Project Development Objective (PDO) is to: (i) enhance connectivity and climate resilience along the MDK road section; and (ii) improve access to basic socioeconomic infrastructure in selected districts of the Far North of Cameroon.

Components

Component Name	Cost (US\$, millions)
----------------	-----------------------



Road Rehabilitation and Maintenance Works	308.00
Improved community infrastructure in selected areas and refugee host communities of the Far North region	19.00
Transport Sector Institutional Strengthening	3.00
Contingency Emergency Response Component	0.00

Organizations

Borrower: Republic of Cameroon
 Implementing Agency: Ministry of Economy, Planning, and Regional Development

PROJECT FINANCING DATA (US\$, Millions)

SUMMARY

Total Project Cost	330.00
Total Financing	330.00
of which IBRD/IDA	330.00
Financing Gap	0.00

DETAILS

World Bank Group Financing

International Development Association (IDA)	330.00
IDA Credit	168.34
IDA Grant	50.00
IDA Shorter Maturity Loan (SML)	111.66

IDA Resources (in US\$, Millions)

	Credit Amount	Grant Amount	SML Amount	Guarantee Amount	Total Amount
Cameroon	168.34	50.00	111.66	0.00	330.00
National Performance-Based Allocations (PBA)	168.34	0.00	53.16	0.00	221.50



Window for Host Communities and Refugees (WHR)	0.00	50.00	0.00	0.00	50.00
Scale-Up Window (SUW)	0.00	0.00	58.50	0.00	58.50
Total	168.34	50.00	111.66	0.00	330.00

Expected Disbursements (in US\$, Millions)

WB Fiscal Year	2023	2024	2025	2026	2027	2028	2029	2030
Annual	0.00	39.20	40.36	42.39	44.22	51.81	62.40	49.62
Cumulative	0.00	39.20	79.56	121.95	166.17	217.98	280.38	330.00

INSTITUTIONAL DATA

Practice Area (Lead)

Transport

Contributing Practice Areas

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	● Substantial
2. Macroeconomic	● Moderate
3. Sector Strategies and Policies	● Moderate
4. Technical Design of Project or Program	● Low
5. Institutional Capacity for Implementation and Sustainability	● Substantial
6. Fiduciary	● High
7. Environment and Social	● High
8. Stakeholders	● Substantial



9. Other

● Substantial

10. Overall

● High

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

Section I.A.4 (c) of Schedule 2 of the FA: Not later than three (3) months after the Effective Date, the Recipient shall have acquired, installed and customized a computerized accounting software, satisfactory to the Association for the Project Implementation Unit at PSRDREN.

Sections and Description

Section I.A.3 (c) of Schedule 2 of the FA: Not later than three (3) months after the Effective Date, the Recipient shall have acquired, installed and customized a computerized accounting software, satisfactory to the Association for the Project Implementation Unit at CPR-FC.

Sections and Description

Section I.A.2 of Schedule 2 of the FA: By no later than one (1) month after the Effective Date, the Recipient shall establish and thereafter maintain during the implementation of the Project a Project Steering Committee (PSC), with the composition, functions, staffing and resources satisfactory to the Association, and responsible for providing oversight and policy guidance to the Project. The PSC shall be co-chaired by Ministers of MINTP and MINEPAT or their representative as further detailed in the Project Implementation Manual (PIM).

Conditions

Type	Financing source	Description
Effectiveness	IBRD/IDA	FA; Article V, Section 5.01(a): The Recipient, through MINEPAT and MINTP, has prepared and adopted a Project Implementation Manual (PIM), in form and substance satisfactory to the Association.
Effectiveness	IBRD/IDA	FA; Article V, Section 5.01(b): The Recipient, through MINTP, has prepared and adopted a Project Procedures Manual for Part 1 and 3 of the Project, in form and substance satisfactory to the Association.
Effectiveness	IBRD/IDA	FA; Article V, Section 5.01(c): The Recipient, through MINEPAT, has prepared and adopted Project Procedures Manual for Part 2 of the Project in form and substance satisfactory to the Association.
Effectiveness	IBRD/IDA	FA; Article V, Section 5.01(d): The Recipient has adopted the Works Security Support Framework (DSAT) in form and substance satisfactory to the Association.



Type Effectiveness	Financing source IBRD/IDA	Description FA; Article V, Section 5.01(e): MINEPAT has concluded with MINDEF a Collaboration Framework Agreement in form and substance acceptable to the Association.
Type Effectiveness	Financing source IBRD/IDA	Description FA; Article V, Section 5.01(f): MINTP has concluded with MINDEF a Collaboration Framework Agreement and substance acceptable to the Association.
Type Effectiveness	Financing source IBRD/IDA	Description FA; Article V, Section 5.01(g): The Recipient, through MINTP, has maintained and extended the mandate of the CPR–FC PIU, with adequate resources, terms of reference and functions, satisfactory to the Association, and has recruited to said CPR–FC PIU the key staff including: (i) an environmental specialist; (ii) a social specialist; (iii) one security specialist, all of them under terms of reference and with qualifications, integrity and experience satisfactory to the Association.
Type Effectiveness	Financing source IBRD/IDA	Description FA; Article V, Section 5.01(h): The Recipient, through MINEPAT, has maintained and extended the mandate of the Special Program for the Reconstruction and Development of the Far North Region-PIU, with adequate resources, terms of reference and functions, satisfactory to the Association, and has recruited to said PIU the key staff including: (i) an environmental specialist; (ii) a procurement specialist, (iii) a social specialist; (iii) one security specialist, all of them under terms of reference and with qualifications and experience satisfactory to the Association.
Type Effectiveness	Financing source IBRD/IDA	Description FA; Article V, Section 5.01(i): The Recipient has established and operationalized a transparent, accessible and effective Grievance Redress Mechanism in form and substance satisfactory to the Association.
Type Effectiveness	Financing source IBRD/IDA	Description FA; Article V, Section 5.01(j): The Recipient has an adequate refugee protection framework.
Type Disbursement	Financing source IBRD/IDA	Description Section III, B, 1 (b) of Schedule 2 of the FA: No withdrawal shall be made under Category (2), unless the Recipient, through MINTP, has prepared, adopted, and disclosed the Biodiversity Management



		Plan in form and substance acceptable to the Association.
Type Disbursement	Financing source IBRD/IDA	Description Section III, B, 1 (c) of Schedule 2 of the FA: No withdrawal shall be made under Category (4), unless the Recipient, through MINTP, has prepared and adopted the Paid Internship Manual in form and substance acceptable to the Association.



I. STRATEGIC CONTEXT

A. Country Context

- Cameroon is a central African, lower middle-income country located in Sub-Saharan Africa (SSA), along the Atlantic coast.** It has a surface area of 475,442 square kilometers, and a population of almost 25.9 million inhabitants. In the decade since 2010, the population rose by 2.5 percent per year, with an average density of 56.2 persons per square kilometer of land area, although with a much higher density in the large urban centers of Douala, Yaoundé, and Garoua, and in the western and northern regions.¹
- Cameroon's situation remains volatile.** The country continues to experience instability in the Far North region near Lake Chad, and in the northwest and southwest regions near the western border with Nigeria. There is also insecurity and an inflow of refugees near the East and Adamawa regions, along the country's border with the Central African Republic (CAR). Cameroon is categorized by fragility, conflict, and violence (FCV) under the World Bank methodology.
- After growing by 3.6 percent in 2021, Cameroon's economy continued expanding in 2022, although at a slightly slower pace.** Real gross domestic product (GDP) grew by 3.4 percent in 2022. It is projected at 4.3 percent in 2023 and should average 4.5 percent in the medium term, driven by Liquid Natural Gas (LNG) exports, primary sector (forestry and logging) and services (primarily in financial, trade and repair, transport, information, and communication services).² In the primary sector, food crops dropped because of higher farm input prices. In the secondary sector, oil production declined, though oil GDP grew by 0.9 percent thanks to buoyant prices. Financial services and communications drove the expansion of the tertiary sector. Staple food prices and administratively controlled prices of selected mass-consumption products have increased, driving headline inflation up in 2022.
- Cameroon has high levels of poverty.** Approximately 25.3 percent of the population—25 percent of women—live in extreme poverty, with less than US\$1.90³. Inequality levels are high; only 13 percent of the national income is shared by the poorest 40 percent of the population, while 35 percent of the income is shared by the richest 10 percent⁴ of the population. The Coronavirus disease 2019 (COVID-19) crisis has reversed much of the progress in monetary poverty reduction that had been achieved in recent years, as it is estimated that the international poverty rate increased by 0.82 percentage points between 2019 and 2020, for the first time in more than a decade. Poverty projections suggest that the rate of extreme poverty will remain high, at nearly 25 percent owing to job and income losses. The number of poor households has continued to increase, with an additional 166,000 people falling into extreme poverty in 2021. Poverty rates are expected to remain above pre-pandemic estimates in the medium term.
- In Cameroon, gender equality has progressed slightly, although gender gaps and disparities exist between rural and urban areas.** The country recognizes the importance of women's empowerment both for its intrinsic value and for its contribution to economic development. Overall labor force participation has remained steady since 2010, with increasing participation of women, although their unemployment and informality remain higher. Antenatal care overall has significantly improved, especially in the regions most in need. However, the lowest rates of care continue to be reported in the rural northern and eastern regions.⁵ Women in rural areas

¹ United Nations Population Division 2019.

² *IMF country report, Cameroon third reviews under the extended Fund Facility Arrangements.*

³ World Bank projection based on the latest Cameroon Household Survey conducted in 2014.

⁴ UNDP (United Nations Development Programme). 2022. *Human Development Report.*

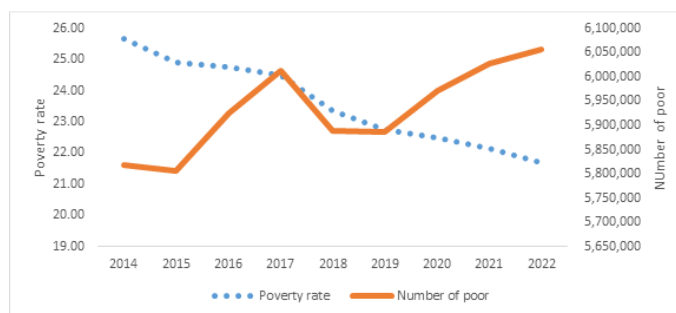
⁵ World Bank. (2022). *Cameroon Systematic Country Diagnostic: and update.*



report receiving antenatal care at rates of more than 15 percentage points below those in urban areas (79.4 percent versus 95.3 percent). Greater distances to health care facilities, reduced availability of adequate care, and some cultural practices seem to be holding back progress in rural areas. Disparities between rural and urban areas over access to education have widened, from a difference of 11 percentage points in 2011 to 14 percentage points in 2018.

- 6. **Gender inequalities are prevalent in refugee camps in Cameroon.** Women and children comprise 80 percent of Cameroon’s overall refugee population; about 55 percent of refugees are below the age of seventeen, and 14 percent are younger than five years of age.⁶ School enrollment and retention rates among girls in the refugee hosting districts are exceptionally low, as a result of their domestic responsibilities, child marriage, teenage pregnancy, long distances to schools, and lack of sanitation facilities and supplies, among other factors. According to United Nations High Commissioner for Refugees (UNHCR) statistics, in the Minawao refugee camp, 14 percent of adults have only informal education; and 49 percent, of which more than half are women, no education at all; 26 percent of school-age children are in primary school, 5 percent in secondary school, and 0.4 percent have a university education. Approximately 50 percent of women have only achieved primary education, which means that young women are less likely to compete in the labor market. The lack of formal jobs in refugee settlements leads women to support their family incomes through their involvement in the informal economy. Besides this situation creating a double burden for women, these activities often put women at risk by making them travel to unsafe areas or at dangerous times, such as through refugee settlements and the surrounding areas, where there is demand for domestic work. Women also face more financial barriers compared to men; whereas men have more potential to earn an income, women are often responsible for care activities at home, and spend less time for paid employment.⁷
- 7. **Russia’s invasion of Ukraine has accentuated inflation, impacting the prices of agricultural and nonagricultural products in Cameroon.** The situation is leading to price hikes not only on key commodities such as wheat and maize, but also fuel and fertilizer. These hikes have major implications for food security in Cameroon, especially in the Far North region, where the combination of climatic factors, intercommunity clashes, and insecurity were already causing harmful consequences.

Figure 1: Actual and Simulated Poverty Rate and Number of Poor at US\$2.15.



Source: MPO, October 2022.

B. Sectoral and Institutional Context

(a) Fragility, Conflict, and Violence in the Far North Region of Cameroon

- 8. **The Far North region is the second most populated region of Cameroon and one of the poorest.** It shares a

⁶ <https://www.unhcr.org/refugee-statistics/download/?url=F3g3K7>

⁷ Bridging the Mobile Gender Gap for Refugees, Mobile for Humanitarian Innovation, 2019.



border with Nigeria to the west, Chad to the east, and is limited to the south by the northern region of Cameroon. It has a population of around 4 million, which represents 18 percent of the total population of Cameroon. The region extends over a territory of 34,263 square kilometers, representing seven percent of the national territory. The region is characterized by a youthful population, which is confronted with difficulties of accessing employment and achieving social and professional integration. A historical lack of development in the region, combined with the significant increase and continued inflow of refugees, has added to the levels of poverty and increased pressures on existing public services and infrastructure. The lack of prospects for youth is a main concern of the government, and all of the other actors who are involved in improving development outcomes.

9. **The security crisis has exacerbated the already difficult living conditions of populations in the Far North of Cameroon.** The Far North region of Cameroon⁸ has been the target of Boko Haram and other Non-State Armed Groups (NSAGs) terrorist attacks since mid-2015, leading to a humanitarian crisis and an inflow of refugees into the Lake Chad region. Violent acts perpetrated by Boko Haram include coercion, abduction, forced recruitment, indoctrination, human rights violations, and violent extremism. In addition to causing immense psychological trauma and weakening social networks, these acts have also disrupted livelihoods and productivity and destroyed existing assets. In addition to direct losses in productive assets, agricultural trade has also been significantly impaired by damage to the road network and the closure of borders.
10. **Perceptions of exclusion spurred by violent extremism have been central to generating grievances that in turn lead to violent mobilization and conflict.**⁹ The joint World Bank–United Nations (UN) 2018 report on "Pathways for Peace: Inclusive Approaches to Preventing Violent Conflict," explains that the origin of conflict stems from people's perception of being excluded and treated unfairly, rooted in inequalities. The presence of Boko Haram and other NSAGs has further sparked new or already existing intra- and intercommunity conflicts. A study carried out by the State and Peacebuilding Fund Project in 2020, Cross-Border Collaboration in the Lake Chad Region Project (P169400), indicated that the social fabric between and within different ethnic or faith groups has been damaged, and latent or overt mistrust between groups has grown. At the same time, mistrust toward the security forces is at a high level. A focus on restoring and enhancing resilience is therefore needed to sort the transition from humanitarian to development activities in the region.
11. **Poverty levels are higher in the northern rural areas of Cameroon, and they are aggravated by various conflicts, and their consequences.** Poverty is heightened in rural areas, and domestic farmers are the poorest group, mainly because of their exposure to food insecurity owing to the climatic context and the inflow of refugees coming from Nigeria and the CAR that is increasing the demand for health care, housing, nutrition, protection, and sanitation.¹⁰ Emergency crises disrupt the systems of production and trade, with a direct impact on food security. Internal displacement by Boko Haram has also worsened the situation and disproportionately affected women, for instance through the perpetuation of gender-based violence (GBV).¹¹ In addition, refugee women suffer from double discrimination, and a stigma that limits the amount of goods that they can sell in the communities; it also hinders their access to services and education, putting them in risky situations of sexual exploitation such as forced prostitution.¹²
12. **The World Bank, following consultation with UNHCR, has determined that Cameroon's refugee protection framework remains adequate for the purpose of accessing financing from the IDA20 Window for Host**

⁸ Including Niger and Chad.

⁹ Lake Chad Region Recovery and Development Project (P161706) Project Appraisal Document (PAD), Report number: PAD3476.

¹⁰ PAM/USAID. (2017). Agricultural Value Chains and Gender in Northern Cameroon.

¹¹ WILPF. (2020). Gender Conflict Analysis in Cameroon.

¹² Ibid.



Communities and Refugees (WHR)¹³. Cameroon has continued to welcome refugees and implement positive protection measures, including ensuring nondiscriminatory access to its territory. Issuance of refugee identity documents and the adjudication of asylum claims have progressed. Additionally, as part of the National Participatory Development Program (PNDP), and with the support of the Ministry of Economy and Planning and the Security Services, an IDA18 WHR pilot project was launched at the end of June 2022 to issue refugees with identification documents, which would facilitate access to services for them. The Government of Cameroon is moving in the right direction to establish a national body that manages and coordinates the protection and assistance of refugees. The Government strategy for improving the living conditions of refugees and host communities focuses on four main areas: (i) strengthening the capacities of the bodies responsible for managing the status of refugees; (ii) facilitating access to basic social services for refugees, host communities and internally displaced persons; (iii) improving the legal security of refugees to promote their resilience; and (iv) improving knowledge of vulnerability factors. Under these focus areas, the Government wishes to take a holistic approach to the socio-economic aspects of the refugee crisis by considering both humanitarian and development aspects. This holistic and global approach will consider the specificities of Central African refugees, Nigerian refugees, and internally displaced persons in the Far North.

13. **The Government proposed strategy is a combination of political dialogue, programmes and analytical work designed to improve the understanding of the root causes of crises.** This program also incorporates the State's own efforts in terms of budgetary and human resources in the three concerned regions (East, Adamawa, North Region). The activities under the strategy will be complementing each other or can be implemented in parallel. In the light of existing constraints, including security and budgetary, the current programme reflects discussions held with the national authorities and the UNHCR and is designed as a selective list of tasks to support the Government's efforts. In terms of short-term support for populations at risk, the Government's objective is to complement humanitarian efforts by focusing on the economic resilience of refugees, displaced and non-displaced populations, and by working with local authorities rather than external agencies to strengthen the provision of basic socio-economic services. Furthermore, the Cameroon Government Programme is realistic as it takes the persistent nature of the current situation as a given, and therefore proposes to take advantage of the Programme's support to prepare for the medium- and long-term responses. This approach is perfectly consistent with the Cameroon 2030 National Development Strategy (SND30) and the Representative Concentration Pathway (RCP), which places better governance of sectors exposed to vulnerability at the forefront of sustainable solutions.

Table 1: Refugee and Host Population in the Far North Region of Cameroon as of April 2023

District	Host Population	Refugee Population ¹⁴	Percent of Total Refugee Population in Cameroon ¹⁵
Diamaré	642,227	8	-
Logone et Chari	486,997	29,909	6.2
Mayo Sava	348,890	9,342	2.0
Mayo Tsanaga	699,971	83700 ¹⁶	17.5
Total	2,178,085	122,959	25.6

¹³ Cameroon's eligibility to access WHR financing was already established under IDA18 cycle. The Government has issued an update of its strategy on May 25, 2023 which is included in the project files.

¹⁴ Source: UNHCR Cameroon Statistics, April 2023.

¹⁵ As of April 2023, the total refugee population in Cameroon is 479,533. Source: UNHCR Cameroon Statistics

¹⁶ Out of which 78,722 are at Minawao camp in Mayo Tsanaga



(b) Socioeconomic Context

14. **Socioeconomic and human development indicators in Cameroon are poor, and gender disparities are flagrant, particularly in the Far North region of the country, where the project will be implemented.** The 2021/2022 Human Development Report¹⁷ ranked Cameroon among the countries with the lowest rates of human development equality between women and men. The maternal mortality rate was high, at 596 per 100,000 live births, and adolescent birth rates were reported to be 104.6 per 1,000 births. Women's attainment in secondary and higher education was 32 percent compared with men's 38 percent. According to 2021 International Labor Organization estimates, women are less than half as likely as men to participate in wage and salaried employment—16.7 percent for women versus 31.7 percent for men; labor force participation is 68 percent for women and 76 percent for men. The share of parliamentary seats held by women is 27 percent.¹⁸ These gender inequalities drive various forms of GBV across the country. For women, the prevalence of physical or sexual violence committed by a husband or partner is 30.5 percent).¹⁹ Overall, that study estimated that in Cameroon, more than 44 percent²⁰ of ever-married women older than 15 had experienced some form of spousal violence—physical, sexual, or emotional.
15. **Women's productivity in agriculture is lower than men's and this is more acute in refugee-hosting districts. Improved connectivity and complementary interventions can help narrow the gap.** Women are overrepresented among the most vulnerable employed groups, especially in rural areas, where they often work as unpaid family support.²¹ Forty-eight percent of women work in agriculture,²² and 37 percent in sales and services. Men employed in the agricultural sector are more productive than women, because they have better access to land and technology, and they are less involved in household activities. Men are often engaged in selling cash crops and large livestock twice a year, whereas women deal with foodstuff, horticultural crops, and small livestock on a regular basis.²³ A qualitative study on women involved in northern Cameroon value chains revealed that most women in rural areas are retailers, and that they sometimes travel more than 5 km to sell their products, whereas men are wholesalers and are owners and renters of shops.²⁴ Overall, women's weak access to markets is negatively impacted by travel time and costs, lack of sanitary facilities in the markets, little decision making concerning land use, their intensive involvement in household and care activities, and their limited access to credit.²⁵ These constraints are exacerbated by the quality of roads; this is negatively impacting women's productivity. The project, through road rehabilitation and maintenance, will directly benefit women by providing better accessibility to markets because of transport prices and cost reduction.²⁶ In addition, the project's targeted complementary socioeconomic investments will contribute to unlocking some of the constraints women face, and will help to improve their productivity.

¹⁷ United Nations Development Program, Human Development Report 2021/2022.

¹⁸ Lake Chad Region Recovery and Development Project (P161706) Project Appraisal Document (PAD), Report number: PAD3476

¹⁹ Bezawit et al., 2022. "Assessment of domestic violence and its associated factors among ever-married reproductive-age women in Cameroon: a cross-sectional survey."

²⁰ Gender Based Violence against Women in Sub-Saharan Africa: A Systematic Review and Meta-Analysis of Cross-Sectional Studies | HTML (mdpi.com)

¹⁷ World Bank. (2022). Ibid.

¹⁸ World Bank Gender Data Portal

¹⁹ Boniface, Epo and Valerie Ongolo Zogo. (2016). "Assessing Gender Inclusion in Cameroon's Rural Transport." Journal of African Transformation, Volume 1, No. 2, 2016, pp. 129-144

²⁰ PAM/USAID. (2017). Agricultural Value Chains and Gender in Northern Cameroon: <https://docs.wfp.org/api/documents/WFP-0000022430/download/>

²⁵ Ibid.

²⁶ Boniface and Ongolo. (2016). Ibid.



16. **In the Far North region of Cameroon, refugee-hosting areas need special attention due to the increased demands of hosting displaced populations, and the resulting pressures on public service delivery systems and infrastructure.** This poor region of Cameroon is greatly impacted by large flows of incoming refugees. According to UNHCR statistics, 78,722 refugees, 16.4 percent of Cameroon’s refugee population, are in the Minawao camp in Mayo Tsanaga,²⁷ and the highest number of refugees outside of the Minawao camp are located around Mora on the axis of the MDK road.
17. **Among refugee and host populations in the Far North region of Cameroon, women and young people are the most vulnerable, and poor connectivity is exacerbating the challenges they are facing.** The proportion of young people in refugee camps without access to education remains high, and women’s literacy is a particularly thorny issue. Twenty-one percent of the refugees registered in the Far North them are women between the ages of 18 and 59, and more than 48 percent of refugees are school-aged children.²⁸ Climate-resilient infrastructures are important for supplying various camps with core relief resources and improving refugee and host communities’ access to the basic socioeconomic infrastructure. The absence of reliable means of transport and financial support for families—maternal and child support—are the two main challenges for the refugees and host communities in the Far North of Cameroon. These challenges prevent them from attending and completing education or accessing health centers, even when school and health infrastructure is available. In addition, water, sanitation, and hygiene infrastructure is needed in schools, and temporary learning spaces need to be transformed into durable classrooms in order to improve this vulnerable population's learning outcomes.

(c) Climate Change Context

18. **Cameroon is already experiencing the impacts of climate change and is at high risk of natural disasters such as flooding of urban areas, river and coastal flooding, landslides, extreme heat, and water scarcity.**²⁹ Cameroon has a humid equatorial climate in the southern part of the country, and a semi-arid dry climate in the North. The provinces in the northern regions of the country are at highest risk of drought, and coastal regions have a substantial risk of flooding, which is increasing with sea level rise. Annual average temperatures have been increasing since the 1960s, with the North experiencing the most rapid temperature rise. Temperatures are projected to continue rising, with the rate of warming higher in the country's interior than on the coast. Average annual precipitation has decreased by 2.9 millimeters per decade on average since the 1960s. Different climate model projections show a wide range of changes over Cameroon, with some projecting increases in average annual rainfall and others a decrease.³⁰ Cameroon’s Nationally Determined Contribution (NDC) indicates an intensification of droughts and an increase in the frequency and intensity of flooding events.³¹ Overall, Cameroon is vulnerable to the effects of climate change, and it ranks 146 out of 182 on the 2020 vulnerability index of the Notre Dame Global Adaptation Initiative (ND-GAIN), which measures a country’s exposure, sensitivity, and ability to adapt to the negative impacts of climate change.³² This index summarizes and ranks countries in terms of their vulnerability to climate change and other global challenges in combination with its readiness to improve resilience.

²⁷ UNHCR – April 2023 – Main persons of concern, Cameroon.

²⁸ UNHCR – April 2023 – Main persons of concern, Cameroon.

²⁹Think Hazard, consulted on February 17, 2021. URL: <https://thinkhazard.org/en/report/45-cameroon>.

³⁰WBG Climate Knowledge Portal, consulted on February 17, 2021. URL:

<https://climateknowledgeportal.worldbank.org/country/cameroon/climate-data-historical>

³¹ Cameroon’s Nationally Determined Contribution to the United Nations Framework Convention on Climate Change; Revised in 2021.

<https://unfccc.int/sites/default/files/NDC/2022-06/CDN%20r%C3%A9vis%C3%A9%20CMR%20finale%20sept%202021.pdf>

³² <https://gain-new.crc.nd.edu/ranking/vulnerability>.



19. **In the Far North, climate change further poses a considerable threat to development gains and future opportunities.**³³ The study "Shoring up Stability in the Lake Chad Region: Addressing Climate and Fragility Risks" highlighted the importance of tackling the impacts of climate change as part of peacebuilding efforts.³⁴ Indeed, climate change is having profound adverse impacts on the security crisis, intensifying existing dynamics and creating new risks. The impacts of climate change in the Lake Chad region can be seen especially in the timing and amount of rainfall, which leads to a loss in productivity in the rain-dependent agricultural areas. The population in the Lake Chad region is caught in a conflict climate risk trap, where violent conflict between state security forces and armed opposition groups, poor governance, endemic corruption, serious environmental mismanagement, and poverty have ruined livelihoods; and climate change is compounding these challenges.
20. **Connectivity challenges in the Far North are compounded by the effects of climate change on the road infrastructure.** Heavy rainfall and extreme temperatures were the major risk hazards identified by the climate and disaster risk screening through the World Bank study "Vulnerability Assessment and Adaptation Strategy of the Cameroon Road Network," as well as the analytical work carried out by the World Bank's project team.³⁵ Rainfall projections indicate that the road exposure to heavy downpours and sustained periods of rainfall is likely to increase over time. The risk screening showed the sections of the MDK corridor that are most exposed to flooding, where the adaptation and resilience measures should be particularly applied for 50- and 100-year return periods. For a 50-year return period, the sections along the corridor that are most exposed to flooding are located on several stretches between Waza and Tilde, and between Maltam and Kousseri. It was estimated that for a 50-year return period, 46 km of the MDK corridor (22 percent of the total length of the road) would be exposed to flood depths more than 20 centimeters. (Details are provided in Annex 2). Furthermore, technical and topographic studies conducted by the Government suggest that the road profile should be raised for 144 km of the corridor (70 percent) to mitigate the risk of water damage on the various layers of pavement.

(d) Road Sector Context

21. **Although roads are the main mode of transport in Cameroon, road density is low. Nearly 60 percent of rural dwellers are disconnected from the network, leaving them isolated from markets and social services.** The official classified road network totals 23,300 km, of which 24.1 percent is paved.³⁶ Road density is only 9 km per 100 square kilometers of land, which compares unfavorably to some lower middle-income countries in SSA—for example, 16 km per 100 square kilometers in Côte d'Ivoire, and 25 km per 100 square kilometers in Ghana. The rural accessibility index (RAI)—defined as the share of the rural population who live within 2 km of an all-season road—is estimated at 33 percent, among the lowest in the region.³⁷
22. **Effective road asset management has been stymied by weak sectoral governance, deficiencies in planning and programming of works, and insufficient financial resources allocated to road maintenance. As a result, only 11 percent of Cameroon's road network is in good or fair condition.**³⁸ Despite the significant increase in the resources of the Road Maintenance Fund—currently US\$120 million annually—road maintenance financing is still based on transfers from the national budget, and thus is not sustainable. Furthermore, planning and programming of maintenance works is not based on the actual condition of the roads because of the lack of a

³³ Lake Chad Region Recovery and Development Project (P161706) Project Appraisal Document (PAD), Report number: PAD3476.

³⁴ Adelphi, Vivekananda et al. 2019. Shoring up Stability in the Lake Chad Region: Addressing Climate and Fragility Risks.

³⁵ Climate Vulnerability Assessment and Adaptation Strategy for the Cameroon Road Network; 20 July 2021; World Bank.

³⁶ Ministry of Public Works, 2020 road classification.

³⁷ Source: National Institute of Statistics 2021 report on the status of Sustainable Development Goal indicators in Cameroon.

³⁸ Data for 2017, from the Integrated Strategy for Multimodal Transport Infrastructure (*Stratégie Intégrée des Infrastructures de Transports Multimodal, S2ITM*)



functioning road asset management system. In addition, unenforced axle load controls pose a serious threat to road assets. This project will provide the necessary technical assistance to the Road Maintenance Fund by establishing a management system to improve the strategic planning for and forecasting of maintenance works.

23. **Climate data and risks are not systematically included in the planning of interventions on the transport network, in project design, construction methods, or in the management of assets and operations.** Decision makers and implementation entities lack the necessary data and analytics on the exposure and vulnerability of the Cameroonian road network to the existing and future effects of climate change. Cameroon's under-designed and undermaintained road infrastructure is particularly vulnerable to natural hazards and climate change impacts.
24. **Cameroon loses approximately 9.8 percent of its GDP annually due to its unsafe roads.** The Global Road Safety Facility estimates the total annual cost of fatal and serious road crashes in Cameroon to be at least US\$3.2 billion, which represented 9.8 percent of Cameroon's GDP in 2016.³⁹ The road fatality rate in Cameroon⁴⁰ was estimated at 30.1 deaths per 100,000 population in 2016. A large gap emerges between the road crash fatalities reported by the Government of Cameroon and the World Health Organization (WHO) estimates: whereas the 2016 government-reported road crash fatalities for the country were 1,879, WHO's estimate was 7,066, almost four times the officially reported figure. With the support of the closed Economic and Monetary Community of Central Africa (*Communauté Economique et Monétaire de l'Afrique Centrale*, CEMAC) Trade and Transit Facilitation Project (TTFP, P079736) and the ongoing Transport Sector Development Project (TSDP, P150999), the government established a road accident database and plans to create a lead agency responsible for the coordination of road safety efforts with the involvement of all relevant stakeholders, such as the ministries in charge of Public Works, Health, Education, the Police or Gendarmerie, and the private sector.
25. **Employment segregation appears in the transport and road sectors in Cameroon.** According to 2021 data from the International Labour Organization, only 10 percent of the people employed in the transport, storage, and communication sectors are women.⁴¹ This reality is reflected in the public administration agencies such as the Ministry of Public Works (MINTP), where the percentage of working women does not exceed 17 percent, and is even less in the northern region. In the case of the Ministry of Public Transport the presence of women is predominant in areas such as translation, reception, and mailing. Women face various barriers during their career cycle, which affects their entry into and career development in jobs linked to the road sector. Some of the barriers relate to their recruitment (limited information); hiring processes that are not gender-sensitive; retention issues such as sexual harassment (SH) in the workplace, work family balance, and limited benefits, and promotion; and limited training or access to mentoring schemes. The project will leverage the existing collaboration framework with the National Advanced School of Public Works in Yaoundé, under the PDST Project, to continue the partnership with the MINTP to support activities aiming at promoting women's entry in the Transport sector. Thus, the project will continue to support efforts to increase the number of women in STEM⁴², then facilitate the transition from universities to work in the Transport sector in the long term.

(e) The Douala–N'Djamena Intra–Interregional Transport Corridor (1,842 km)

26. **The Far North of Cameroon is a trade crossroads; however, cross-border trade is adversely impacted by the**

³⁹ <https://www.roadsafetyfacility.org/country/cameroon>

⁴⁰ Global Health Observatory data repository accessed on February 1, 2022. <http://apps.who.int/gho/data/node.main.A997?lang=en>

⁴¹ 2021 data from the International Labour Organization:

https://data.worldbank.org/indicator/SL.TLF.ACTI.MA.ZS?locations=CM&name_desc=false

⁴² Science, Technology, Engineering, and Mathematics.



security crisis and the resulting closure of borders. Markets in the Far North play a key role in regional trade with neighboring Chad and northeast Nigeria. Maroua and Kousseri host the most important reference markets in the Far North, which are responsible for the flow from rural to urban areas during harvest,⁴³ and the opposite during the lean season. However, as a result of insecurity and conflict in the Greater Lake Chad basin, these trade corridors are often closed by the government, which reorients trade flow more toward southern destinations, particularly the CAR, Douala, Equatorial Guinea, Gabon, and Yaoundé.⁴⁴

27. **Transit through Cameroon remains the most viable sea access for landlocked Chad, despite a high transport and time cost.** In the 2010s, 80 percent of goods in transit through Douala port were destined to Chad, and about 79 percent of Chad's imports passed through the Port of Douala.⁴⁵ Some limited improvements in corridor performance have been observed in more recent times. These are mostly the result of ongoing road improvement works, and the trade facilitation activities financed by IDA under the recently closed CEMAC TTFP (P079736) and the ongoing Multimodal Transport Project (MTP) (P143801). Other development partners have also supported improvements to key intra- and interregional transport corridors. However, more efforts are needed to substantially reduce transport costs, which should result in lower transport prices. Transport costs along the road corridor to Chad indeed remain among the highest in SSA.⁴⁶ Some of the road sections along the corridor are still highly degraded, hampering the corridor's efficiency. Improving these links is identified as a strategic pillar of the CEMAC Program Regional Economic Program II 2017–2021 (*Programme Economique Régional*, PER), which was endorsed by all CEMAC governments in October 2017.
28. **The rehabilitation of the Mora-Dabanga-Kousseri (MDK) section of 205 km of the Douala–N'Djamena intra-Interregional road transport corridor was unsuccessfully attempted by the closed CEMAC–TTFP, despite the innovative output-based disbursement force-account (OBFDA) arrangement that was implemented with the support of the Army Corps of Engineers (ACE).**⁴⁷ This road section is considered the most deteriorated part of the Douala–N'djamena corridor, and is of critical regional importance. Its current condition exacerbates the isolation of the Far North region, and hampers efforts to better integrate the northern regions with the rest of the country. Its dilapidated condition also limits the ability of humanitarian organizations and the government to transport food and other aid to villages and communities in the Far North, and to ensure connectivity with landlocked Chad. This road section is therefore critical to the economic and social development of an increasingly fragile and unstable subregion. The long-term stabilization and development of the Far North region of Cameroon and of Chad will require adequate transport infrastructure to enable security, humanitarian assistance, the provision of basic services, and the movement of people and goods.
29. **The very poor condition of the MDK road section, the Tilde bridge and the Kousseri bypass road which can become impassable during the rainy season, leads to social isolation of the population in the neighboring towns and villages. The situation is expected to deteriorate further with the impacts of climate change.** It is estimated that more than half of the freight traffic to N'Djamena has been diverted through an alternative corridor in Chad through Moundou—an extra 120 km—due to the extremely deteriorated condition of the MDK section. This adversely impacts the poorest regions of Cameroon in the North and Far North, which are thus deprived of the collateral economic benefits of through traffic. Further, the secondary and tertiary road networks connecting rural communities to the corridor are extremely dilapidated and vulnerable to climate change

⁴³ Sorghum, maize, millet, and rice are the primary staples grown in the Far North region. Onion is also an important cash crop.

⁴⁴ <https://reliefweb.int/report/cameroon/cameroon-price-bulletin-december-2021>.

⁴⁵ S2ITM (Elaboration de la Stratégie intégrée des Infrastructures de Transport multimodal au Cameroun - Elaboration of the Integrated Strategy of Multimodal Transport Infrastructures in Cameroon), Fifth report, p. 204.

³⁹ Sub-Saharan African Transport Policy Programme (SSATP). 2013. Logistics Cost Study of Transport Corridors in Central and West Africa.

⁴⁰ Implementation Completion and Results Report, Report No: ICR00004456.



impacts. These roads require rehabilitation or reconstruction as well as maintenance in order to ensure access to economic and social opportunities and to facilitate the deployment of humanitarian aid in the Far North.

30. **The RAI is estimated at 48 percent using 2020 data.** After the project implementation, the modified RAI—a 5 km buffer—is expected to increase from 80 to 95 percent. The population density is higher in Mora and Kousseri, which are the main urban centers in the Logone-Chari and Mayo-Sava divisions, concentrating more than 80 percent of businesses and employment opportunities in the Far North region. Kousseri accounts for almost 60 percent of businesses in the region and has a strategic position next to the Chad border; it is therefore attractive to businesses, the number of which has doubled since 2010. Consequently, Kousseri and Mora are subjected to an unprecedented flow of refugees looking for employment opportunities. Figure 3 (Section IV) shows the 30 -- km buffer along the MDK road and the potential communal and regional road sections to be rehabilitated.
31. **Under the closed CEMAC-TTFP, and the ongoing MTP projects, implementing socioeconomic infrastructures along the localities crossed by the roadworks has improved living conditions for the people.** The execution of related works has had a positive contribution in the local context. Along the Ngaoundéré–Garoua section, the CEMAC Project supported the construction of 33 classrooms, 1,800 meters of protective walls for existing schools, 22 toilets, and 25 water boreholes, and along the MDK road, it financed the construction of seven public schools, two health centers, and four water boreholes. These activities produced positive changes in: (i) the dynamics of the key socioeconomic sectors of the project area by reducing transport and delivery times for food products; and (ii) access to basic social services in health and education. Moreover, they have contributed to significantly improving the living conditions of the local population, in terms of education, health, safety, availability of drinking water, and reduction in the workload of women.⁴⁸
32. **The project will leverage labor intensive public works (LIPWs) programs for the improvement of communal roads, and will employ local communities and refugee host communities, who will receive financial remuneration for small works.** The project will ensure that women are encouraged to participate in the program.

C. Relevance to Higher Level Objectives

33. **The proposed project aligns with the FY 17–21 Cameroon Country Partnership Framework (CPF)⁴⁹ and the 2019 Performance and Learning Review⁵⁰ (PLR).**⁵¹ The three focus areas for Cameroon CPF (FY17–FY21) were to: (i) address multiple poverty traps in rural areas, with a focus on northern regions; (ii) foster infrastructure and private sector development; and (iii) improve governance. The proposed project will address the first focus area by supporting socioeconomic investments and improving access to livelihoods and rural transport links in the Far North region of the country. It will address the second and third focus areas by supporting the improvement of transport connectivity in the Far North, and by strengthening the capacity of the key institutions that are responsible for the management and governance of the road sector in Cameroon.
34. **The project also aligns with the Cameroonian government's recognition of the Far North's status as an economically depressed region, with the same designation as the North-West and South-West regions.**⁵² This materialized under the 2022 decree establishing, organizing, and operating the Special Reconstruction and

⁴¹ Implementation Completion and Results Report, Report No: ICR00004456.

⁴² Report number: 107896.

⁵⁰ The PLR extended the CPF by one year to FY22. A new CPF will be prepared in FY24.

⁴³ Report number: 137218.

⁴⁴ Decree number 2019/3179/PM of September 2, 2019.



Development Program for the Far North Region (PSRDREN). The program's main mission is the socioeconomic recovery of the Far North Region through lasting peace by coordinating and monitoring the execution of investment projects of the Presidential Plan for the Reconstruction and the Development of the Far North Region.

35. **The proposed project aligns with the objectives of the Prevention and Resilience Allocations (PRA) for Cameroon.** The criteria to determine whether a project is in line with the PRA are: (i) its particular focus on geographical areas of conflict; (ii) the extent to which it proactively addresses conflict drivers and the needs of vulnerable groups; and (iii) its immediate contribution to the mitigation of conflict escalation or the impacts of conflict. The project will support efforts to increase access to basic social services and boost local development strategies, especially in rural and conflict-affected areas, while building a more inclusive society through improved service delivery and greater access to opportunities.
36. **The project is fully consistent with the aims of IDA20 WHR interventions and the broader World Bank objectives for FCV countries.** The Window underpins the development approach to forced displacement, by supporting commitments made by host governments to enact policy change and address the social and economic dimensions of refugee situations through interventions that aim to: (i) shift from crisis response to managing risks; (ii) support host communities and lagging regions; (iii) move toward social and economic inclusion; and (iv) take regional and country-level approaches. The project interventions will help in: (i) mitigating the shocks caused by inflow of refugees and creating social and economic development opportunities for refugee and host communities; (ii) facilitating sustainable solutions to protracted refugee situations; and (iii) strengthening preparedness for increased or potential new refugee flows. The project will construct an improved transport link between two FCV affected countries—Cameroon and Chad—and in doing so will play an important role in rebuilding lives and providing economic opportunities for communities bordering Cameroon by strengthening trade links between these countries and into Cameroon's economic center.
37. **Rationale for accessing IDA Scale-up Window Short Term Maturity (SUW-SML).** The project is benefitting from the IDA SUW-SML funding because of its strong potentially transformative impacts on economic growth by improving infrastructure and road connectivity in the Far North region of Cameroon, thereby contributing to improving the resilience and livelihoods of 925,000 beneficiaries. The project is aligned with the following IDA Special Themes: (i) Jobs and Economic Transformation, through the creation of employment opportunities, and the rehabilitation of small community infrastructures in selected areas; and (ii) FCV, through addressing some of the conditions that make it possible for Boko-Haram and other NSAGs to recruit youth in the Far-North of Cameroon, such as lack of educational and economic opportunities.
38. **The proposed project will coordinate with, and leverage investments being made by other World Bank projects in the Far North region of Cameroon, especially the Lake Chad Region Recovery and Development Project (PROLAC, P161706).** PROLAC supports regional coordination and crisis monitoring, rural connectivity, and agricultural livelihoods in selected provinces of Cameroon as well as other countries of the Lake Chad region. The proposed project will maximize synergies with other development partners—geographically, in scope, and type of support—to ensure convergence for maximum consistency and impacts. It will leverage investments by other development partners, including the European Union (EU) and the African Development Bank (AfDB), in the Far North. Key relevant interventions include proposed AfDB–EU cofinancing for the rehabilitation of the Moutourouwa–Maroua and Magada–Yagoua sections of the Douala–N'Djamena Road corridor.



39. **The proposed project aligns with objectives set in Cameroon’s NDC⁵³ to climate change.** Cameroon’s NDC identified construction of transport infrastructure that is resilient to climate change impacts as a priority. The proposed project aims to rehabilitate and upgrade the MDK Section of National Road 1—a sample of priority secondary and communal roads—and to reconstruct the Tilde Bridge and rehabilitate the Kousseri bypass road so that they will be climate resilient and passable in all seasons. The proposed project will also design and construct climate-resilient community infrastructure such as markets, water points, schools, and health centers that contribute to the resilience of the communities served. The investments are directed to low-traffic volume roads that provide access to communities without all-weather access, and without causing deforestation. The investments will not increase the capacity of the roads and there are no lower carbon alternatives to deliver the project objectives.
40. **The project is in line with the World Bank Global Crisis Response Framework (GCRF).** Transportation investments play a key role in ensuring food security by making food available and by providing and improving households access to food through adequate infrastructure, storage, and transportation services. Component 1 is responding to the GCRF food security Pillar 1 through the provision of climate-resilient rehabilitation of the MDK corridor, and the rehabilitation and upgrading of approximately 200 km of regional and communal access roads. Component 2 is responding to the GCRF Pillar 3 related to resilience through the rehabilitation of basic socio-economic infrastructures, including rural markets with spaces dedicated to women, storage facilities for the local population, refugee, and host communities. Finally, the project Component 3 is responding to the GCRF Pillar 4 on policies, investments and institutions strengthening through the capacity building and technical assistance activities that will contribute to the strengthening of the MINTP, MINT, and the Public Universities.

II. PROJECT DESCRIPTION

A. Project Development Objective (PDO)

PDO Statement

41. The proposed Project Development Objective (PDO) is to: (i) enhance connectivity and climate resilience along the MDK road section; and (ii) improve access to basic socioeconomic infrastructure in selected districts of the Far North of Cameroon.

PDO Level Indicators

42. Achievement of the PDO will be assessed through the following PDO indicators:
- Average travel time Between Mora and Kousseri (hours).
 - Length of MDK road vulnerable to identified climate hazards (to floods and heat) (km).
 - Number of schools, health centers, and markets with improved road access.
 - The share of people with access to an all-weather passable road within 5 km of the MDK road section (modified road access index) (dissagregated by refugees and host communities, and women) (percentage).
 - Share of beneficiaries reporting satisfaction with the socio-economic infrastructures (percentage).

⁵³ World Bank. 2021. Van Steenberg, Frank, Fatima Arroyo-Arroyo, Kulwinder Rao, Taye Alemayehu Hulluka, Kifle Woldearegay, and Anastasia Deligianni. *Green Roads for Water: Guidelines for Road Infrastructure in Support of Water Management and Climate Resilience*.



B. Project Components

43. The proposed project will reduce the isolation of communities, including refugees and host communities, through climate-resilient connectivity improvements. It will equally support the livelihoods of communities through the construction of socioeconomic infrastructure and the provision of temporary employment opportunities for women and men in the project area. These interventions are expected to restore and enhance resilience in the Far North region of Cameroon, and help to mitigate the drivers of conflicts. It will also support the livelihoods of communities through the construction of socioeconomic infrastructure, the provision of temporary employment opportunities for women and men in the project area, and overall improvement in the economic conditions due to enhanced connectivity.
44. The project will have the following components:
45. **Component 1: Road Rehabilitation and Maintenance Works (IDA: US\$308.0 million equivalent, of which US\$40 million from WHR).**
46. **This component is designed to support the ongoing efforts to improve transport connectivity in the greater Lake Chad region and the Far North of Cameroon.** The rehabilitation of this corridor is a key priority of the Government of Cameroon⁵⁴ in order to facilitate the safe movement of people and goods on one of the key lifeline road axes, RN1, which connects the southern part of the country with the northern regions. The 61 km-long Maroua–Mora Road on RN1 was successfully rehabilitated with the support of the World Bank under the MTP (P143801). The Recipient requested retroactive financing up to Euro 60 million (US\$66 million equivalent) to fund the rehabilitation of the first 25 km of the MDK, from Mora.
 - 1(a) Climate-resilient rehabilitation—to a bituminous paved road standard—and safety improvements along the 205 km MDK section of National Road 1 (RN1), ensuring all-season conditions through construction or rehabilitation of drainage structures (mainly culverts and submersible slabs), waterproofing of the roadway, and construction of a heat-resistant wearing course.
 - 1(b) Climate-resilient reconstruction of 180 meters of the Tilde Bridge to ensure that it is passable all year round.
 - 1(c) Climate-resilient rehabilitation—to a bituminous paved road standard—of 7 km of the Kousseri bypass road, to improve access for refugee and host communities.
 - 1(d) Climate-resilient rehabilitation and upgrading of approximately 200 km of regional and communal access roads located in refugee settlements and refugee host communities in the Logone and Chari, and Mayo-Sava divisions. Interventions will be based on roads classified as “impassable” based on the spatial analysis of climate vulnerability (level/duration of flooding).
 - 1(e) Implementation of LIPW community maintenance and preservation programs for the roads rehabilitated under 1(d), to promote climate resilience and sustainability of investments and provide employment opportunities for local communities. This includes: (i) the elaboration of Work Plans; (ii) the provision of materials, tools, and equipment; and (ii) the management of works, storage locations and sites, as well as quality control.
 - 1(f) Carrying out road safety audits along the MDK corridor, the Kousseri bypass, and a sample of regional and rural roads under parts 1(d) of the project, and proposing remedial measures to be incorporated into the civil works contracts.
 - 1(g) Carrying out supervision of civil works under parts 1(a), 1(b), 1(c), and 1(d) of the project.

⁵⁴There was a failed attempt to rehabilitate this road under the closed CEMAC Transit and Transport Facilitation Project.



- 1(h) Carrying out environmental and social (E&S) risk mitigation and management—including implementation of action plans to address GBV, sexual exploitation and abuse (SEA), violence against children, occupational health and safety (OHS), and HIV and AIDS-monitoring and evaluation (M&E), third-party integrated performance audits and road user satisfaction surveys, and establishment and implementation of a grievance redress mechanism.
- 1(i) Project management and operating costs of the Joint Financing Project Implementation Unit - *Cellule des Projets Routiers à Financement Conjoint* (CPR–FC) and the MDK Directorate, including salary of key personnel, external financial audits, operating costs, technical assistance and training costs, acquisition of office furniture, equipment, logistics, citizen engagement, and M&E.
47. **A climate vulnerability assessment for the roads was carried out to identify the necessary measures to enhance the road's climate resilience.** The measures will be embedded in the design and will include the required strengthening and capacity enhancement of drainage and retaining structures; introduction of additional culverts, drainage, and retaining structures; the use of heat-resistant bituminous pavement where needed, of adapted design such as the green roads for water concept, where and when technically justified. The road design will also include various types of physical improvements to improve road safety, following the implementation of a comprehensive road safety assessment of the roads' condition.
48. **This component will finance the rehabilitation and upgrading of approximately 200 km of access roads to climate resilience standards.** These roads are located in refugee and host communities areas in the Logone and Chari, and Mayo-Sava divisions, and will be selected based on well-defined prioritization criteria, including their vulnerability to climate change. Their maintenance and rehabilitation will include climate-resilient features like regular technical inspections, routine, and periodic maintenance of drainage systems, retaining structures, pavement surface, and other assets, with particular attention to road segments that are climate and natural hazard vulnerability hotspots. The detailed criteria and procedures to identify rural access roads to be supported under this component are briefly described in the economic analysis section, and will be detailed in the project implementation manual (PIM). Where possible, civil works will use the labor-intensive public works (LIPW) approach for rural road rehabilitation and maintenance.
49. **This component will also support the implementation of a labor-intensive community maintenance and preservation system for rural roads to promote the sustainability of investments.** The methodology for selecting the beneficiaries of the program will be the same as the lottery-based approach that has been adopted in other fragile contexts in Central Africa.⁵⁵ This approach was considered the most transparent methodology by the populations concerned, to be compared with section II-F. The subcomponent aims to maintain the current level of service against climate hazards by facilitating the drainage of rainwater and minor repairs to structures and carriageways, to achieve the designed life span of the road.
50. **The component will use a demand-driven approach to identify complementary investments necessary to strengthen the climate, social, and economic resilience of populations around the RN1 corridor in the Far North, including refugee and host communities.** The project will finance the development of mobility plans that incorporate the voices of the beneficiary communities; specific consultations with women of low income and other vulnerable groups will be implemented to identify their mobility priorities. Mobility plans will consider elements such as road prioritization to improve access to main destinations—such as educational and health facilities—climate vulnerabilities, identification of the best location for complementary interventions as storage

⁵⁵ The lottery based approach was successfully implemented in several fragile contexts including under the Central African Republic Rural Connectivity Project (P160500).



facilities to reduce women’s travel times; and definition of design features related to violence prevention (for example, openness, visibility, and lighting).

51. **This component will foster citizen engagement through the inclusion of digitally enabled feedback loops—including geo-enabling initiatives for monitoring and supervision (GEMS)—to allow for real-time input on project activities.** Consultations will be held with direct stakeholders to gather feedback and inform the proposed design and the prioritization of activities. In close collaboration with local authorities, the project’s implementation will support the development of a location-based feedback system that enables project beneficiaries and targeted communities to register their feedback, grievances, and concerns. Further, through stakeholder engagement, feedback channels on security risks will be established for communities and project activities. The security situation will be monitored from an operational perspective, i.e. location of attacks, and also from a strategic perspective to respond to changes in the nature of attacks and violence.
52. **Component 2: Improved Community Infrastructure in Selected Areas and refugee Host Communities of the Far North region (IDA: US\$19.0 million equivalent, of which US\$10 million from WHR).**
53. This component is designed to integrate local socio-economic content in the main operation with the objective of maximizing the wider economic benefits of the roads to be rehabilitated. The targeted community infrastructures include the following activities:
 - 2(a) Climate-resilient construction, rehabilitation, and upgrading of small community infrastructure in selected areas, and in refugee camps and host communities in the Far North.
 - 2(b) Carrying out supervision of civil works under part 2(a) of the project.
 - 2(c) Carrying out E&S risk others GBV, SEA, violence against children, HIV/AIDS-M&E, third-party integrated performance audits, and establishment and implementation of a grievance redress mechanism.
 - 2(d) Preparation of a project’s E&S risk management documents, as well as detailed engineering designs of civil works for works under parts 2(a) and 2(b).
 - 2(e) Project management and operating costs of the project implementation unit (PIU) within PSRDREN, including salary of key personnel, external financial audits, operating costs, technical assistance and training costs, acquisition of office furniture, equipment, and logistics, citizen engagement, and M&E.
 - 2(f) Strengthening the institutional capacity of the PSRDREN for the planning, coordination, implementation, and monitoring of economic and infrastructure interventions in the Far North region.
54. **The small community infrastructure will be of various kinds, based on the needs and demands of refugee and host communities.** The identification, design, and construction of the community infrastructure will consider the refugee and host community’s needs, and will use climate-resilient design standards for the implementation of the selected activities. Refugees from Chad, Niger, and Nigeria living in the Kousseri bypass catchment area will also benefit from these small community infrastructures. These infrastructures include among others: (i) construction or rehabilitation of markets, water points , and vaccination parks for cattle; (ii) construction or rehabilitation of schools and health centers, and provision of internet access; (iii) creation of community multimedia centers equipped with computers, a mini Wi-Fi network, payment terminals, and training for local communities; (iv) construction or rehabilitation of bus stations or logistic platforms; (v) construction of storage facilities leased to women to store and sell their products; and (vi) rehabilitation of youth centers equipped with sports and digital equipment to improve and reinforce social cohesion.
55. **This component will support capacity building activities for strengthening the knowledge and skills of women in agriculture to enhance their potential for entrepreneurship.** For example, creating cooperatives for identified agricultural products and definition of a scheme could improve women’s access to credit. Women’s cooperatives have proved to be a good vehicle for women to raise their consciousness and economic empowerment, while



facilitating social cohesion in the communities. Financing the community's infrastructure along with the rural roads is expected to maximize the project's benefits to the population and build local community engagement and ownership in the project's influence. These infrastructures will also contribute to closing the spatial disparities in access to basic socioeconomic services in the Far North of Cameroon.

56. **Component 3: Transport Sector Institutional Strengthening (IDA: US\$3.0 million equivalent).**

57. This component will finance capacity building and institutional-strengthening activities of the transport sector, among other things, in the following areas:

- 3(a) Building capacity for the inclusion of climate resilience in the planning and management of road infrastructure.
- 3(b) Supporting main public engineering universities on climate adaptation, civil engineering, transportation planning, and digital technology.
- 3(c) Developing and operationalizing a road accident database management system disaggregated by gender, refugee, and host community.
- 3(d) Undertaking training and awareness campaigns on road safety in the project area.
- 3(e) Strengthening the capacity of the Ministry of Transport (MINT) and other public road safety stakeholders in road safety management.
- 3(f) Installing an internship program for students to work within the project, with a focus on females.

58. **The paid-internship program supported by the project will target female students and help address barriers to their exposure to the sector, and enhance their future aspirations.** A gender analysis of the human resource processes within the sector will be established to ensure that the internships address barriers that women could be facing; for example, transportation fees, inflexible schedules, lack of family friendly workplace, and SH in the workplace. The aim is to provide young female engineer with practical work experience in the roads and infrastructure sectors, over the project life cycle. This practical work experience in the sector will make them more competitive and employable in the sector in the long term and will support the school to work transition. At the end of the internship, the project will help women identify jobs related to their careers either within the ministry or other agencies or in the private sector in transport, in collaboration with other ministries and civil society organizations (CSOs).

59. **This component will also support the following activities:** (i) development and operationalization of a road accident database management system disaggregated by gender, refugee, and host communities; (ii) training and awareness campaigns for schoolchildren, motorbike drivers, truck drivers, and refugee and host populations in the project area, differentiated for refugee and host community audiences. The road accident database management system will collate all data associated with road accidents, including data that can be attributed to climate change (poor visibility, slippery surfaces, flooding, poor-quality pavement surface; (iii) the development of mobility plans that consider the voices of the beneficiary communities, where specific consultations with low-income women and groups in a situation of vulnerability will be established to identify their mobility priorities. Mobility plans will consider elements such as road prioritization to improve access to main destinations—like education and health facilities—climate vulnerabilities, identification of the best location for complementary interventions like storage facilities to help reduce women's travel times, and definition of design features such as those related to violence prevention (openness, visibility, lighting); and (iv) various technical assistance activities to support the Ministry of Transport and the Road Safety Observatory in coordinating road safety management at the national level.



60. **Component 4: Contingency Emergency Response Component (US\$0 allocation).** This component will facilitate access to rapid financing by allowing reallocation of uncommitted project funds in the event of a natural disaster, either by a formal declaration of a national emergency or upon a formal request from the Government of Cameroon. This component will use IDA's immediate response mechanism. To trigger this component, the Government of Cameroon 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 Government of Cameroon will request the World Bank to re-allocate World Bank project 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 PIM will apply to this component, which will be part of the project operations manual, detailing financial management, procurement, safeguards, and other necessary implementation arrangements following World Bank guidelines and regulations.

C. Project Beneficiaries

61. **The project will directly benefit 925,000 inhabitants—of which more than 400,000 are women— including approximately 123,000 refugees.** Better, safer, and climate-resilient road infrastructure will improve access to education, health care facilities, and markets. It will also increase access to economic opportunities, especially for women and young girls. The direct beneficiaries of improved road conditions include road users and populations living near the roads that will be upgraded and maintained. The project will also contribute to reducing travel time and transportation costs for a variety of road users. Climate-resilient roads will ensure all-weather access to basic socioeconomic infrastructure in the project area. Components 1 and 2 will impact health and education outcomes and the livelihood of communities living around the corridor. Through its LIPW approach for rural road rehabilitation and maintenance, the project will generate employment opportunities for people living around the corridor, including women. The project will also improve the capacity of MINT personnel on road asset management at the national and subnational levels; inclusion of climate resilience in the planning and management of road infrastructure; building skills in geospatial planning and analysis for road prioritization based on climate risks; socioeconomic indicators; and geospatial techniques.
62. **The project will benefit the majority of refugees who are living near the MDK corridor.** The project will also cover the eastern border of the Far North region, and will target and prioritize the main roads in the Mayo–Sava and Logone and Chari departments. In the Mayo–Sava department, the project will target roads linking the city of Mora to four refugee sites (Limani, Magdeme, Minawao, and Waza), as well as villages next to the Nigerian border of Kolofata and Amchide. In the Logone and Chari departments, the project will mainly target refugees in the city of Kousseri, and along the borders with Nigeria and Chad.
63. **In the Mayo–Sava district, the road rehabilitation program is expected to serve approximately 350,000 people and increase direct access to integrated health centers, elementary and secondary schools, and markets.** It will also help unlock agricultural potential along the Mayo River. The project will also finance key socioeconomic infrastructure to improve the integration of refugees, and social cohesion in their host communities.
64. **Refugees are mainly in Kousseri and along the border with Chad and Nigeria, the project is expected to serve approximately 123,000 refugees; that is, approximately 25 percent of all refugees in Cameroon.** The project objective is to improve connectivity and access to basic socioeconomic infrastructures. Given the already high

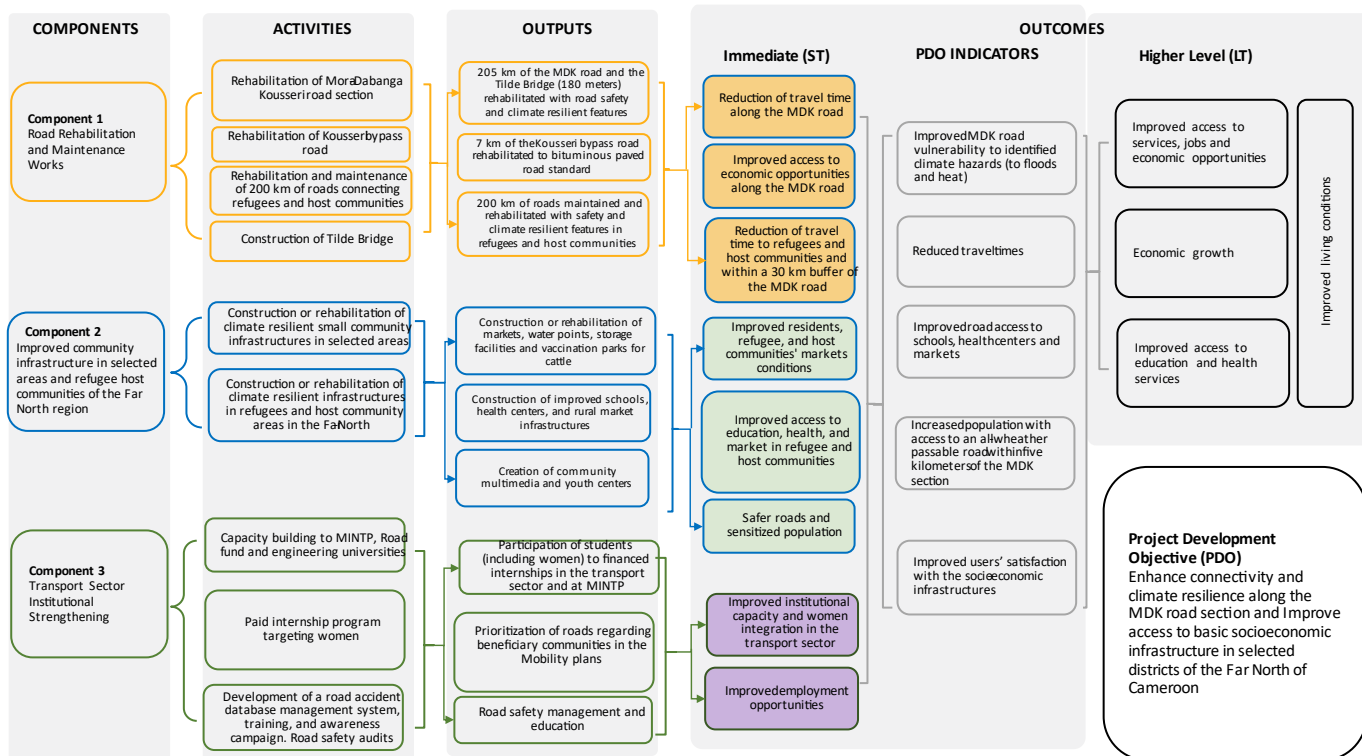


pressure in Kousseri’s limited public goods, the project is expected to invest in improving access to refugee camps and improving refugees’ access to basic socioeconomic infrastructures. Targeted areas include the cities of Mora, Waza and Kousseri; and the villages of Tilde, Maltam, Double, Tchakamari and Zizagué.

D. Results Chain

65. The key underlying assumptions of the project’s theory of change are that the combined effect of improving the climate resilience, safety, and physical condition of the MDK road section and selected critical roads in a 30 km buffer along the MDK road, coupled with the construction or rehabilitation of basic socioeconomic infrastructures, will lead to improved connectivity in the Far North region, better access to economic opportunities and social services, reduced community isolation, improved income, improved social cohesion, and a reduced risk of conflict and violence in the region (see Figure 2).

Figure 2: Project Theory of Change



E. Rationale for World Bank Involvement and the Role of Partners

66. The World Bank has a comparative advantage in the Cameroon road sector, due to its technical expertise, and its successful and longstanding track record of preparing and supporting similar projects in fragile countries in Africa. The value added of the World Bank’s support includes: (i) leveraging lessons learned and experiences from existing and past projects in Cameroon, including the closed CEMAC–TTFP and the ongoing TSDP (P150999); (ii) sharing implementation experiences from similar World Bank financed projects in FCV contexts, including the failed attempt to rehabilitate the MDK road section through the CEMAC-TTFP (P079736) and the ongoing rural roads spot improvements through the Chad Region Recovery and Development Project (PROLAC, P161706); (iii)



sharing knowledge of and experience in establishing security arrangements under a works security support framework—*Dispositif Sécuritaire d’Accompagnement des travaux* (DSAT) in collaboration with the Ministry of Defense (MINDEF); (iv) expertise in undertaking transport projects with cross-sectoral links—education, health, agriculture, energy—while ensuring the application of technically robust and climate-resilient engineering design standards, reliable fiduciary procedures, E&S safeguards, adequate quality control and supervision, and efficient M&E systems; and (v) experience in supporting the Government of Cameroon in maximizing the value for money of their infrastructure investments, especially by ensuring maximum benefits for the climate, women, and vulnerable populations.

67. **The World Bank also has the comparative advantage of supporting countries or regions in early reconstruction and economic recovery, especially in FCV contexts.** The Cameroon Far North is recovering from the presence of Boko Haram insurgents. Cameroonian armed forces have conducted intensive operations to secure the region, and the populations are slowly returning to their homes. Through this project the World Bank will contribute to unlocking the region’s potential and improving the quality and intensity of travel with Nigeria and Chad. The rehabilitation of the MDK road will play a catalytic role of facilitating future donor engagement in the region, improving regional cooperation, and supporting the long-term recovery of the Far North province. The World Bank will implement its structural engagement model of convening national agencies, implementing agencies, development partner investments in corridors, and the rural transport sector for sustainable development.

F. Lessons Learned and Reflected in the Project Design

68. **Overall, the project incorporates lessons learned from road projects in Cameroon, and the failed attempt to rehabilitate the MDK road under CEMAC–TTFP.** Past and ongoing transport operations have highlighted several key elements that are relevant to the successful implementation of road projects in Cameroon. These include: (i) how to pilot options for implementing major civil works contracts in a fragile context, improve the socioeconomic conditions of local communities, and further encourage governments to improve infrastructure planning and asset management capacity; (ii) how to design and implement road projects with proper and well-designed climate resilience and adaptation features based on adequate climate change vulnerability assessment and screening; (iii) community buy-in and support for the project are key to ensuring the safety of workers and populations, and to the project’s success; (iv) security management plan and other mitigation measures, based on thorough security risk assessment, are critical in order to provide protection for workers and local populations in the work zone; and (v) construction and socioeconomic activities can help to avoid conflicts, maintain peace, create jobs, and support communities in fragile areas.
69. **The proposed project draws lessons from the unsuccessful attempt to rehabilitate the MDK road under the closed CEMAC–TTFP through an Output-Based Designated Force Account (OB DFA) mechanism.** The OB DFA approach was adopted in 2016 in the face of difficulties in carrying out works in a context characterized by persistent insecurity. Under the OB DFA, the ACE directly carried out the civil works using its internal procedures. Works were to be implemented through two work programs (WPs) corresponding to very specific results in outputs like base camp and kilometers of roadway constructed; or intermediate targets of earthwork and production of aggregates. The OB DFA failed for the following reasons:
- **Lack of understanding of the OB DFA approach by the various actors, particularly ACE resulted from:** (i) the poor experience of ACE and implementing agencies in handling such a complex operation. ACE did not have any successful track record of implementing large civil works contracts. Further, it was not provided with sufficient equipment and human resources to successfully implement the works.
 - **Insufficient implementation of force-account management tools and cost accounting;** and the



complexity of the force-account approach linked to output-based results.

- ***Supervision of the works failed to recognize the specificities of the OBDFA.*** The mandate of the supervision firm was not adapted to the force-account and output-based nature of the OBDFA.

70. **The proposed project will capitalize on and benefit from the successful management of security risks during the implementation of the OBDFA.** While OBDFA was not successful, the security management framework performed well as it enabled the Government to monitor security risks, and safely deploy firms and subcontractors on the MDK corridor without any incident. This security apparatus deployed under OBDFA is still functional and is being used by the government to conduct maintenance of traffic works along the corridor. The MINDEF is responsible for providing security for the works and sites through a DSAT. The same DSAT will be deployed under the proposed project.
71. **The project will adopt a phased approach to civil works based on prevailing security conditions.** Security conditions along the MDK corridor are not homogeneous. While areas that are close to the border with Nigeria present a high security risk, the following sections are relatively secure: (i) the first 62 km along MDK, where no attacks have been reported in the past three years; and (ii) the last 30 km of the corridor linking Maltam to Kousseri, a city located across the bridge from Ndjamena in Chad. The Government of Cameroon intends to start works in these two sections, and subsequently expand works in the other sections, depending on the level of security that has been established.
72. **Drawing lessons from CEMAC–TTFP, the proposed project will adopt the classic contractual approach, which consists of recruiting qualified private contractors selected through either a competitive procedure, or a direct contracting process. This is the most realistic option for implementing road works in the Far North.** The OBDFA approach proved to be too complex and difficult to implement in a conflict situation. It also transferred the risk of construction management to an entity that had little experience in large-scale civil works. Nonetheless, by the time of CEMAC–TTFP’s closing, the Government of Cameroon managed to mobilize two contractors that were willing to take over the works with the protection of the Army. The two contractors remained in the project area after project closing, and successfully conducted maintenance works on behalf of the government. In addition, the contractor that successfully rehabilitated 62 km of the Maroua-Mora Road under the MTP (P143801) has been retained by the government, and is equally involved in maintenance works on the MDK corridor, with the support of the security management system deployed under CEMAC–TTFP.
73. **Thanks to the security protection provided under the DSAT, the Government of Cameroon was recently able to deploy several contractors and consulting firms in the Far North to work on contracts financed by the National Budget, AfDB, and the World Bank** (see Table 2). The government will rely on the contractors that are already present in the project area. For instance, it intends to award the first 25 km of the MDK Corridor to one of the contractors who is present in the project area using the direct contracting method. In order to protect the workers, local population, equipment, and materials used by the contractors to properly carry out the works the level of security provided will not be interrupted during the project. This will help attract additional contractors for the other roads to be rehabilitated by the project; will ensure competition; and will keep the prices at reasonable levels. Contractors will have their own unarmed guards, equipped with telecom equipment to report any suspicious activity or to alert security forces in case of an incident.



Table 2: Recent Civil Works Contracts under Procurement/Implementation in the Far North

Projects	Contracts	Number of local bids received	Number of international bids received
World Bank (IDA)			
Inclusive and Resilient Cities Development Project - (P156210)	1 - Rehabilitation of urban roads	2	1
	2 - Construction of buildings and public infrastructure	7	0
Lake Chad Region Recovery and Development Project - (PROLAC, P161706)	1 - Rehabilitation of roads in the departments of Logone–Chari (50 km)	4	2
	2 - Rehabilitation of Bodo–Makary (27 km), and Birni–Zimado (50 km)	5	2
Multimodal Transport Project (MTP) (P143801)	Rehabilitation of the Maroua–Mora road (62 km)	0	4
AfDB			
Transport Sector Support Project (Phase 2)	1 - Construction of the Bogo–Pouss road (64 km)	1	4
	2 - Construction of the Bongor Bridge	2	8
National Budget			
Maintenance works along the MDK road		Direct contracting	
AFD			
Regional Capitals Project – CT2	Mora urban roads	8	2
IsDB			
Roads – Phase 1	Maltam – Goulfey-Lele-Kobro-Blangoua Makari-Amchilga-Djadjaya-Fotokol Goulfey-Makari-Ngouma	7	0
Roads – Phase 2	Makari-Hile-Alifa Mada-Karena Makari-Blangoua-Ngoum-Madaik Honkol-Khalkoussam-Kidjime-Zigue	18	0

Source: MINTP 2023.

Note: AfDB = African Development Bank; IDA = International Development Association; AFD = French Development Agency; IsDB = Islamic Development Bank.

74. **Unlike with OBDFA, the management system for works under the proposed project will be substantially streamlined.** It will be structured around a streamlined execution unit, a supervision firm, and the central and decentralized entities of the MINTP. All of the other structures that were involved in the OBDFA unnecessarily populated the project’s organizational chart with limited value.
75. **Under the proposed MDK rehabilitation works, attention will be paid to security-related clauses in the contracts for civil works. The specific conditions of the works contract should include the security risk dimension of MDK, which should not systematically qualify as force majeure.** These contractual adjustments would reduce the risks incurred by the government due to the prevailing insecurity in the region.



76. **The proposed project will capitalize on the social safeguard provisions implemented under CEMAC–TTFP.** The provisions for the social safeguards, and specifically the grievance redress mechanism (GRM), were OBFA's strong point because it made it possible to capture and process all the complaints and restore the population's confidence in public authorities; this served as a catalyst for the return of other state and nonstate actors to the Far North region of Cameroon. The project recruited a nongovernmental organization (NGO) that was operational in the field. The project organized weekly meetings where every actor, including the NGO in charge of the GRM and the Third-Party Monitoring (TPM), and apprised all actors of the situation and reported any feedback they received. The TPM had a presence in the field for monitoring and handling eventual complaints and for ensuring onsite supervision during the COVID-19 crisis. All complaints received were processed and closed.
77. **Under CEMAC–TTFP, expanding the scope of the project to finance socioeconomic infrastructure for local communities along the road corridor helped to foster inclusive outcomes.** These activities helped create acceptance of and support for the project. However, it quickly became clear that the road being rehabilitated was not one of the immediate concerns of the populations around the road. Their main concern seemed to be much more immediate, and purely local in scope: that is, having access to a bare minimum of services. As a result, the restructuring of CEMAC–TTFP included building various elements of a socioeconomic infrastructure.
78. **Lessons learned from designing and implementing road projects without climate-resilient features.** Prolonged closures of roads in response to more frequent and intense flooding and erosion due to climate change effects impacts the welfare of the people, and disturbs their lives, especially in isolated rural areas. The lessons learned called for a specific detailed study and guide on vulnerability and climate change adaptation strategies for the road network in Cameroon. This helped to carry out specific screening and analytical work on the most exposed and vulnerable zones along the MDK road corridor, and its buffer area in the Far North region. The findings of the screening and analytical work will be incorporated in the design of the adaptation measures for the MDK road, the rural roads, and the socioeconomic investments that will be included in the project.
79. **For labor intensive works, experience in the neighboring CAR, as well as in other post-conflict contexts, suggests adhering to the following principles:** (i) beneficiary selection should be perceived as fair and transparent. For example, in the case of the CAR–Rural Connectivity Project (P160500), a public lottery was used to select beneficiaries; (ii) in addition to setting quotas for women and other vulnerable groups, measures should be set to mitigate the social and security obstacles to employment faced by these groups, and should be discussed in advance with communities to ensure that they will not oppose the project; and (iii) after having clearly explained the selection criteria, local authorities should be involved in the choice of works, but they should not be given the final say, in order to minimize the risk of capture by elites. The above lessons are included in the project design.

III. IMPLEMENTATION ARRANGEMENTS

A. Institutional and Implementation Arrangements

80. **The institutional arrangements for the project are organized around the comparative advantage of the key ministries in implementing activities.** (See Annex 1.) Specifically, the MINTP will have oversight on all transport-related activities, including technical and fiduciary responsibility for all of the maintenance and rehabilitation works, including the MDK road section and all of the other regional and communal roads. The Ministry of Economy, Planning, and Regional Development (MINEPAT) will be responsible for all of the socioeconomic



infrastructure to be constructed, rehabilitated, or upgraded under the proposed project.

81. MINTP will be responsible for the implementation of Components 1 and 3:

- **The procurement, financial management (FM), and M&E aspects of Components 1 and 3 will be carried out by the MINTP's existing CPR–FC.** This unit manages two key World Bank-financed projects, including the TSDP (P150999), as well as other projects supported by AfDB, and other multilateral and bilateral donors. The unit has experienced staff and is supported by a strong cadre of consultants.
- **To facilitate project implementation, MINTP has created a decentralized PIU in the Far North region.**⁵⁶ The decentralized MDK unit (MDK Directorate) within MINTP will manage the technical aspects of Component 1, and will implement and monitor E&S safeguards.
- **The road safety technical assistance activities under Component 3 will be managed by CPR–FC.** The unit is staffed with a focal point from MINT who will have a direct role in implementing technical activities related to MINT, and will coordinate the preparation and review of key documents and deliverables.

82. MINEPAT will be responsible for implementing Component 2. MINEPAT, through the newly established Special Program for the Reconstruction and Development of the Far North Region (PSRDREN), will have technical and fiduciary responsibility for the implementation of the project's socioeconomic infrastructures through a decentralized PIU to be established in Maroua.

83. Both CPR–FC and PSRDREN will be reinforced with additional staff to facilitate the implementation of the proposed project.

84. Implementation coordination and oversight responsibility for the proposed project will be exercised by a joint coordination and steering committee cochaired by MINTP and MINEPAT. The steering committee will be supported by a technical monitoring committee in charge of monitoring project activities and the implementation of steering committee decisions. The technical committee will be staffed by qualified technical experts to be chosen for the most part from the line ministries.

85. A collaboration framework agreement will be signed between the MINDEF, MINTP, and MINEPAT for the protection of works. This agreement will provide the framework for operations, security, and a code of conduct for the military personnel involved in the provision of security for the road rehabilitation and maintenance works (Component 1), and the community infrastructure works (Component 2).

B. Results Monitoring and Evaluation Arrangements

86. Framework for M&E of outcomes and results. The project will establish a real time and comprehensive M&E system that will rely on a system of primary and secondary data to monitor project implementation, and assess progress toward achievement of the PDO. This system will help to identify gaps and necessary adjustments for the project's successful implementation. The M&E system will also support project supervision by ensuring that baseline and follow-up survey data on key performance indicators are available and regularly updated.

87. Use of the geo-enabling initiative for monitoring and supervision (GEMS): The project will rely on the World Bank's GEMS initiative to systematically enhance the M&E system as well as to supervise activities. The GEMS initiative was launched by the FCV Group for this specific purpose in FCV settings. This is achieved by building capacity among clients, partners, and World Bank field teams to leverage field-appropriate technology for digital data collection and analysis. Using these tools and methods will enhance the transparency and accuracy of M&E,

⁵⁶ See the December 12, 2022, Note N° 11269/L/MINTP/SG/DGTI/CPR-FC/IP.



and increase the accountability of TPM of the project.

88. **The project will rely on a participatory approach to design and will implement an impact evaluation. The impact evaluation will be conducted in order to enable evidence-based investment choices and demonstrate the realization of wider economic benefits within the project, by shifting the focus from inputs to outcomes and results.** The World Bank will support the development of the impact evaluation design, while the project coordination unit (PIU) will be responsible for data collection and analysis. The real-time impact evaluation will help identify any bottlenecks that need to be removed to enhance the wider economic benefits of the project, thus building adaptive learning into the project. The impact evaluation will use rigorous data and advanced research methodology to identify the expected changes in the livelihoods and welfare of the people living along the MDK road. The detailed scope of work on impact evaluation will be defined in the first year of implementation by the Government of Cameroon, with technical assistance from the World Bank Group (WBG). The impact evaluation will increase knowledge of the differential impacts of road investments on household behaviors and welfare deriving from spatially coordinated investments in road accessibility, schools, health facilities, markets, and agricultural centers.

C. Sustainability

89. **The sustainability of project outcomes will depend on stronger road sector institutions and the availability of financial resources for road maintenance.** The project will support the following Component 3 technical assistance activities, which are aimed at building the capacity of MINTP: (i) development of a road asset management system that includes climate considerations; (ii) capacity building for the mainstreaming of climate resilience in the planning of road network interventions; (iii) technical assistance for improving the financing and governance structure of the road maintenance fund; and (iv) training for MINTP staff to build their capacity to manage the sector.
90. **Climate change.** According to the World Bank,⁵⁷ climate change is expected to: (i) increase mean annual temperatures and rainfall; (ii) make rainfall more erratic; and (iii) increase the occurrence of storms, floods, and droughts in the project area. Destructive storms and droughts will have devastating effects on transport infrastructure, and recurrent floods will be responsible for the largest share of economic and human losses in the project area. The increase in flooding will also have serious implications for agriculture, food security, public health, infrastructure, and trade routes. Therefore, the project's technical design will include measures to mitigate climate risks and reduce road damage caused by extreme weather, particularly heavy precipitation, flooding, and extreme heat. The drainage systems will be designed to handle a higher intensity and frequency of extreme storm events. Structural protection measures such as embankments and retaining structures will be provided. The design of culverts will be adjusted or retrofitted to accommodate greater accumulation of water volumes within a short period of time. The bituminous pavement will be designed to be resilient to extreme heat waves. Finally, community-based maintenance will be an important element for ensuring the climate resilience of targeted roads. (See Table 3.)

⁵⁷ See World Bank Climate Change Knowledge Portal.



Table 3: Summary of Key Project Climate Resilience Features

Component 1: Road Rehabilitation and Maintenance Works	
Rehabilitation of the MDK corridor (205 km)	<ul style="list-style-type: none"> • Road Geometry: 144 km of raised road profile (70 percent of the corridor) to reduce the risk of pavement damage due to flooding. • Pavement design: Use of specific asphalt binder grade to account for higher temperature in the project area (100 percent of the corridor) • Road drainage: Replacement of 115 existing metal pipe culverts (95 percent of hydraulic structures) with larger box culverts to handle higher intensity storms;⁵⁸ Increased size (hydraulic section) of 6 existing box culverts to handle higher-intensity storms. • Green Roads for Water Guidelines: Slope stabilization: kilometers of bioengineering solutions for improved slope protection; Creation of ponds at selected hydraulic structures to benefit the community and pastoralists (locations to be determined after consultations with communities). • Planting of trees along the corridor to reduce greenhouse gas (GHG) emissions, to provide soil stabilization, cooling effect for non-motorized transport, and for pavement. Expected result: 205 km of roads made resilient to the climate risks identified in the project area (mainly floods, and rising temperatures).
Reconstruction of the Tilde Bridge (180 meters)	<ul style="list-style-type: none"> • New bridge with increased hydraulic section to handle 100-year storm. Expected result: A new bridge that is able to withstand the larger storm events that have been noted as a trend in the project area.
Rehabilitation of the Kousseri bypass road (7 km)	<ul style="list-style-type: none"> • Road Geometry: Raised profile of the entire road to reduce flooding risk to the pavement. • Road drainage: Construct hydraulic structures to handle higher- intensity storm events. Expected result: 7 km of roads made resilient to the climate risks that have been identified in the project area (mainly floods, and rising temperatures).
Rehabilitation and upgrading of approximately 200 km of regional and rural access roads located in refugee and host communities	<ul style="list-style-type: none"> • Road Geometry: 200 km of raised road profile (mostly re-graveling) to reduce flooding risk of pavement. • Road drainage: Construct hydraulic structures to handle higher- intensity storm events. • Planting trees along regional and rural access roads to reduce GHG emissions, to provide soil stabilization, cooling effect for non-motorized transport, and for pavement. • Green Roads for Water Guidelines: Bioengineering solutions for improved slope protection (length to be determined). Expected result: 200 km of roads constructed to climate- resilient standards, with a focus on all-season access and larger culverts to be able to handle large storm events.
Labor-intensive community maintenance and preservation program for the rural roads rehabilitated under the project	<ul style="list-style-type: none"> • Enhanced climate-resilient maintenance strategy for rural roads, and hydraulic structures with the engagement of local communities. The climate resilient maintenance strategy will include provisions for regular technical inspections, routine, and periodic maintenance, with specific considerations for natural hazards and climate change vulnerability hotspots. • Maintenance of 200 km of regional and rural access roads to be rehabilitated or upgraded under the project. Attention will be paid to all maintenance services, like cleaning and maintenance of drainage systems, removing storm damage and debris, cleaning of roads and roadside vegetation. Particular attention will be paid to climate

⁵⁸ Intensity-duration-frequency curves (IDF curves) will consider the influence of climate change. The IDF curves will be updated with the rainfall characteristics projected for future climate scenarios.



Component 1: Road Rehabilitation and Maintenance Works	
	vulnerability hotspots. Expected result: Sustainable maintenance system for 200 km of regional and rural roads rehabilitated under the project.
Component 2: Improved community infrastructure in selected areas and IDP host communities of the Far North region	
Climate-resilient construction, rehabilitation, and upgrading of small community infrastructures in selected areas and in refugee camps and host communities in the Far North	<ul style="list-style-type: none"> • Adoption of climate-resilient design standards for the construction and rehabilitation of small community infrastructure. Examples of resilience measures include designing of infrastructure considering passive cooling, and the incorporation of enhanced drainage facilities. • Construction of water points, and basic infrastructure for pastoralists in drought prone areas. • Climate-resilient rehabilitation of schools and health centers. Examples of resilience measures include designing of infrastructure considering passive cooling, and the incorporation of enhanced drainage facilities. • Planting trees to provide shading and cooling and reduce GHG emissions.

91. **Technical inspection of over 100 hydraulic structures along the MDK road, carried out in preparation for updating the detailed design, shows that all the structures need to be replaced and built to climate-resilient standards.** This applies also to the 180 meter Tilde Bridge, and the 7 km paved Kousseri bypass, which will be completely rebuilt to new climate-resilient standards. The rehabilitation of approximately 200 km of communal and regional roads under the project will be climate-resilient.
92. **The bituminous pavement of the MDK road and the Kousseri bypass will be heat-resistant.** Asphalt pavement inevitably suffers rutting distress induced by repeated loads under high temperatures; this can be effectively alleviated by the modification of asphalt binders. The updating the detailed design for the MDK road will propose the use of optimal asphalt modifiers to enhance the performance of asphalt pavement at high temperatures in the modifier type, additive amount, and improving effect. Although the production costs of modified asphalt binders are often higher than those of virgin asphalt binders, they can significantly extend the life of the road and reduce maintenance costs, showing a significant benefit in the long term.
93. **The project will seek to close gender gaps in mobility, agricultural productivity, and labor force participation.** In terms of mobility, besides of incorporating designed features for violence prevention environmental design (e.g., openness, visibility, lighting) and using information on women’s mobility patterns as part of the selection criteria for the prioritization of roads (for instance, health centers and schools), the project will support complementary interventions that will support women’s mobility by bringing opportunities closer to women through socioeconomic infrastructures. Regarding agricultural productivity, the project will support women farmers’ productivity through provision of complementary socio-economic infrastructure and better access to markets and inputs suppliers. Storage facilities to be leased to women to store and sell their products will also be rehabilitated and constructed. In addition, the project will finance capacity building activities to enhance their entrepreneurship potential, and employment opportunities through labor intensive public works (LIPW) program to maintain the 200 km of access roads to be rehabilitated. Finally, the project will support the representation of women in the transport sector through a partnership between one or more engineering schools in Cameroon and the MINTP. Usage of complementary socio-economic infrastructure by women to improve their productivity and reduce their time poverty will be measured through the percentage of storage facilities constructed or rehabilitated, reserved/leased to women. Improved representation of women in the



Transport sector will be measured through the number of women enrolled in the internship program within the MINTP and the percentage of women from the internship program who report being employed 12 months after they completed the internship.

IV. PROJECT APPRAISAL SUMMARY

A. Technical, Economic and Financial Analysis

Technical analysis:

94. **The project design and conceptual framework were informed by an analytical work conducted by the World Bank: they have responded to the government's needs to evaluate the vulnerability of the Cameroonian road network in regard to the effects of climate change.** The study shows that Cameroon's road infrastructure systems are increasingly vulnerable to the negative impacts of climate change. Extreme rainfall and flooding, heat and cold waves, droughts, storms, and abnormally high winds are extreme events that affect road infrastructure. This has costly impacts in terms of maintenance, repair, and loss of connectivity. However, many of these impacts can be avoided or mitigated through proactive adaptation measures. It is essential to modernize the network and strengthen its resilience to all types of events; this is a critical consideration in protecting existing and future investments in road infrastructure and the economic, social, and other functions that these investments serve. The following three adaptation and resilience strategies were analyzed: (i) structural engineering options; (ii) non-engineering options; and (iii) doing-nothing options. Considering these three strategies, or a combination of them, are useful in defining an action plan that will adapt to the types of climate events identified in the project area.
95. **A climate change and natural hazard vulnerability assessment guide and climate adaptation strategy for Cameroon's road network was also prepared.** This report suggested the use of an approach that links road infrastructure and water resource management: Green Roads for Water. This solution, which integrates water resource management, has the double advantage of protecting road infrastructure and creating sources of water supply for local communities, thus avoiding, either directly or indirectly, agropastoral conflicts. This approach, which applies adequately in the semi-arid areas and flood plains of the Far North, will be evaluated, and validated, for use when and where it is technically justified by the updated technical studies that will be conducted before implementation.

Spatial economic analysis for a better prioritization of the project investments

96. **The project developed a prioritization methodology, and conducted a comprehensive geospatial analysis to identify the major access gaps for refugees settlements, host communities, schools, health centers, markets, and economic opportunities conditional on climate variability and conflict events.** The results show that the entire main communal road network is in poor condition. There are several refugee settlement sites in the project area located near Limani, Magdeme, and Waza, and a refugee camp at Minawao⁵⁹. There are 41 schools and seven health centers that are poorly connected or isolated from the main road network in a 30 km buffer around the MDK road, and these numbers are expected to increase with the targeting of host communities in the Far North of Cameroon. Most of the Far North's economic opportunities--about 60 percent of employment and businesses created--are concentrated in Mora and Kousseri. According to the spatial analysis, 46 km of the

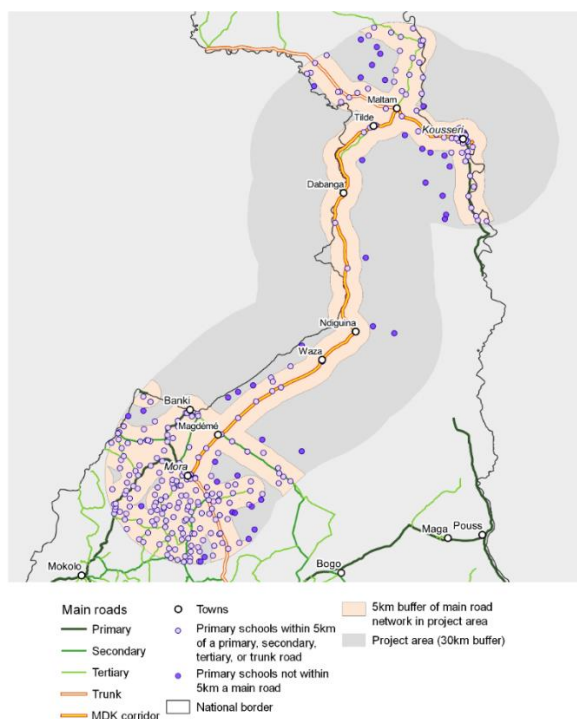
⁵⁹ Minawao is the only official refugee camp in the project area.

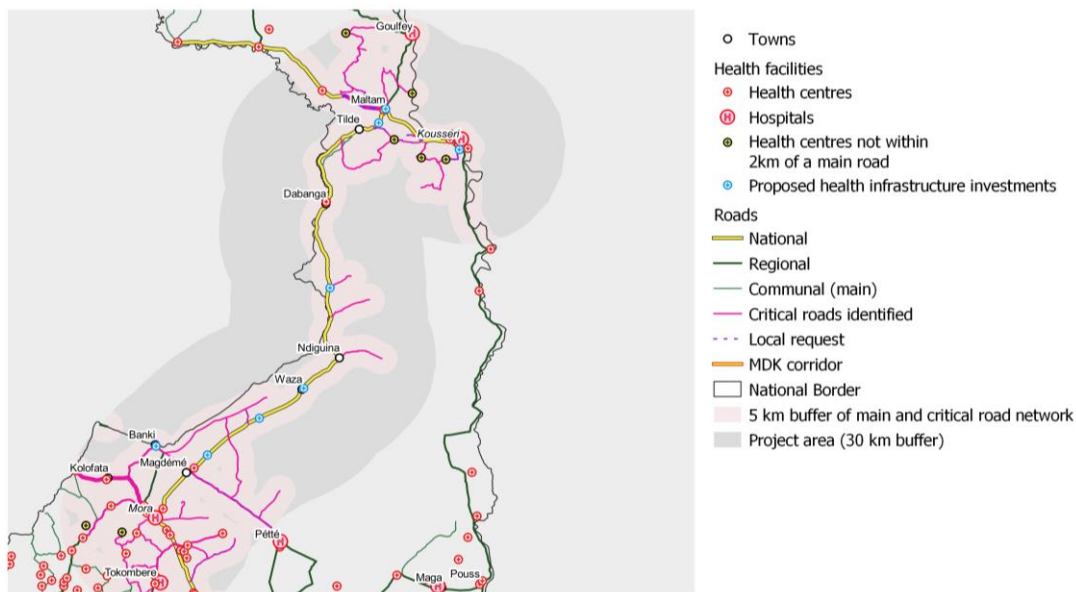


MDK corridor, or 22 percent, would be exposed to flood depths of more than 20 centimeters, and the most exposed sections are located between Waza and Tilde, and between Maltam and Kousseri. However, considering the potential water damage to all layers of the road, the technical studies and topographic surveys conducted by MINTP suggest that overall, 144 km of the MDK corridor, or 70 percent, are vulnerable to floods.

- 97. **The project area is prone to conflicts.** Since 2020, there have been 665 events of violence and armed conflict, and these events resulted in about 667 fatalities. Most of the occurrences are concentrated in the southern part of the corridor—around Mora, Amchide and Kolofata—where 69 percent of all of the events and 62 percent of the fatalities during this period took place.
- 98. **There is a strong spatial correlation between violent conflict and school closures, especially in the area around Kolofata and Amchide, villages next to the Nigerian Border.** Fifty-six primary schools were closed in the project area between 2016 and 2021, mainly in the areas along the Nigerian border. Overall, it is projected that the project has the potential to improve the RAI by 14 percentage points—from 48 percent before investments to approximately 62 percent after project implementation.
- 99. **The project will contribute to the improvement of human capital outcomes in the Far North of Cameroon.** The project area has a high density of primary schools and health centers, which are evenly distributed across the populated areas. However, the connectivity needed to access primary education and health centers remains a challenge, since many primary schools and health facilities are not located within 5 km of a main road. This isolation is problematic; the project will help connect these isolated schools and health centers to the whole transport network.

Figure 3 (a, b): Accessibility to Schools and Health Centers Along the MDK Road





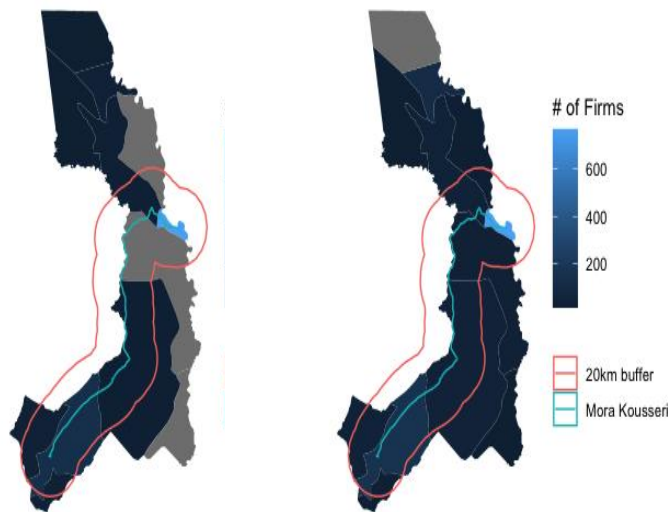
Source: World Bank staff computation, 2023.

Note: Based on Open Street Map, business census, and sectoral data (closed primary schools are in red).

100. **The project has the potential to improve firm productivity and business creation.** The density of firms remains low along the MDK corridor except in the two main cities of Mora and Kousseri, where 80 percent of the country’s employment and businesses are located.

Figure 4: Density of Firms in the MDK Corridor

Total Firms in Mayo Sava and Logone et Chari

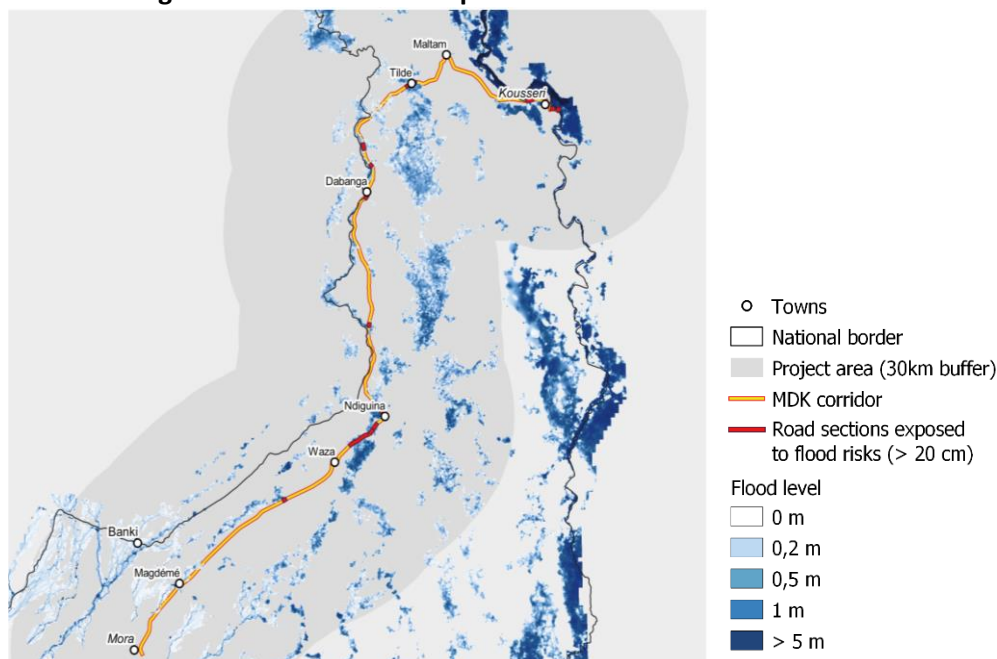


Source: Cameroon Business Census - 2009 - 2016

101. **The project will contribute to resilience to climate shocks for the Far North Cameroon transport network.** The road network is exposed to flood depths; the most exposed sections are located between Waza and Tilde, and between Maltam and Kousseri.



Figure 5: Corridor Flood Exposure for a 50-Year Return Period



102. Overall, the project has the potential to improve the RAI by a minimum of 14 percentage points: from 48 percent before investments to approximately 62 percent after road rehabilitation and maintenance.

Economic and Financial Analysis

103. **The project investments consist of using safety and climate-resilient features to rehabilitate the MDK as well as a sample of selected regional and communal roads connecting residents, refugees, and host communities.** These works will induce socioeconomic benefits such as improved connectivity and road conditions, reduced travel costs, and increased accessibility to basic social and economic opportunities, as well as improved road safety. These positive impacts will spread to the Far North region of Cameroon, benefiting equally local populations, refugees and host communities by bringing better access to social and economic infrastructures, enhanced trade and access to markets, and will boost local agriculture production, which will result in improved household welfare, inclusion, and the region's overall resilience, post-recovery efforts, and economic growth.

104. **The project conducted a standard economic analysis using the Highway Development and Management Model, version 4 (HDM-4) and the Road Economic Decision Model (RED).** HDM-4 was used to evaluate the 205 km road section between Mora, Dabanga, and Kousseri, and the RED model to rehabilitate and maintain regional and communal roads. Although the traditional economic evaluation of roads using HDM-4 hardly captures the expected wider economic benefits, it is a globally accepted analytical tool used to simulate life cycle conditions and costs; it performs well in identifying the economic decision criteria that are important when considering multiple road design, and maintenance alternatives.

105. **The cost-benefit analysis (CBA) conducted with HDM-4 and RED includes, as part of the costs, total investments in infrastructure, rehabilitation, and maintenance.** The main factors driving the results of these analyses are the direct benefits associated with: (i) vehicle operating costs (VOCs); (ii) monetized travel time for passengers and freight; and (iii) the social and environmental costs 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 combined with road safety and GHG emission reduction to estimate the project’s overall net benefits. Results indicate that the investments have positive net present values (NPV) and economic internal rates of return (EIRRs) above the threshold of 10 percent (see Table 4). A sensitive analysis was also conducted, using a 12 percent discount rate and a 30 percent increase in investment costs and 30 percent decrease in traffic.

Table 4: Net Present Value and Internal Rates of Return for Civil Works

	Baseline		Sensitivity (+30% Investments)		Sensitivity (-30% traffic)		Sensitivity (discount rate)
	EIRR (%)	NPV (US\$ million)	EIRR (%)	NPV (US\$ million)	EIRR (%)	NPV (US\$ million)	NPV (@12%) (US\$ million)
Road sections							
MDK (paved)	24.03	169.84	18.72	107.84	13.6	123.63	125.77
Regional and communal Roads	24.1	19.7					
Overall project	24.0	174.1					

106. **Overall, the rehabilitation of the MDK road is economically sustainable; it will yield a 24 percent EIRR, and a NPV of US\$174.1 million.** A sensitivity analysis was carried out using a scenario of a 12 percent discount rate, examining increasing costs, or decreasing traffic; and both together. The road rehabilitation remains economically sustainable, and the IRR varies between 14 and 18 percent; in all cases, the NPV remains positive and above US\$100 million.

107. **The maintenance and rehabilitation of the communal and secondary roads linking local communities are also economically justified.** The sample of selected and prioritized communal and secondary roads yielded an average EIRR of 24 percent, and an NPV of US\$19.7 million. This result contributes to an overall economically justified project, with a 24 percent EIRR and a NPV of US\$174.1 million.

Road Safety Assessment

108. **Road safety.** An assessment of road safety using the road safety screening and assessment tool (RSSAT) was carried out. The overall project safety impact metric is less than 1, indicating an overall reduction of almost 34 percent in fatalities predicted for the project scenario, compared to the existing baseline condition at this stage. The project relies on the RSSAT tool to carry out a road safety assessment of Component 1 and of a selected sample of roads for Component 2. The results of these RSSAT assessments will help inform the design of roads through the inclusion of safety measures such as road signs, barriers, and traffic-calming measures. Pavement markings will be incorporated in the final designs of selected roads, to cope with post-project traffic flows.

109. **Overall, the project’s average safety impact is estimated at 0.66, which indicates a reduction of 34 percent in fatalities once the project is operational, and the safety features have been integrated into the design of the MDK road and in all of the communal 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. These works will aim for a complete upgrading of all road signs, whatever the type of works or roads. Particular attention will be paid to speed-calming measures in community crossings, schools, health



centers, and markets that are near to the roads. Road safety audits will be conducted both before and after works, to ensure that the roads are designed and built in accordance with best practices in road safety. These audits will be conducted in collaboration with the Ministry of Transport.

GHG Assessment

110. A GHG assessment was conducted to compare “with project” and “without project” scenarios, and to compute the project’s net GHG emissions over a 20-year evaluation period. The GHG assessment estimates the impact on emissions of: (i) the rehabilitation and upgrading of 205 km of the MDK corridor with climate-resilient features; (ii) the rehabilitation and upgrading of a selected sample of communal and earth roads in a 30 km buffer along the MDK road. The GHG emissions assessment also considers maintenance of the selected roads. For the MDK road, the traffic or demand projections and related emissions were obtained through the HDM-4 model, originally developed by the World Bank, which simulates road conditions over the life cycle of the road and computes the resulting financial, economic, and environmental costs. The Roads Economic Decision Model (RED) developed by The Africa Transport Policy Program (SSATP) was used to compute traffic projections for the lower traffic volume for communal and earth roads, and the HDM-4 model was used to estimate emission factors. The GHG assessment for the communal and earth roads relied on a sample of 27 roads, representing a total of 360 km located in a 30 km buffer along the MDK road.

111. The total net GHG emissions of the rehabilitation and maintenance of the selected road network will be 106 kilotons of carbon dioxide equivalent for the project lifetime; the project will avoid 5.3 kilotons of carbon dioxide equivalent annually. The project baseline (or “without project”) emissions are 2,404 kilotons of carbon dioxide, and the gross (or “with-project”) emissions are 2,297 kilotons of carbon dioxide equivalent (see Table 5). The reduction of GHG emissions will be the consequence of the improved and continuously well-maintained road conditions, especially on the 205 km of the rehabilitated MDK road, which will result in higher average speeds—80 km per hour from a 50-km per hour at baseline—hence lower emission factors, as well as lower fuel consumption and less vehicle deterioration. Planting trees along rural roads will also contribute to further reducing GHG emissions in addition to stabilizing soils, restoring natural resources, and improving erosion and flooding management.

Table 5: Summary of the Project Baseline, Gross and Net Carbon Dioxide Equivalent Emissions Over the Evaluation Period and Annual Average

	Baseline Emissions	With Project	Net Emissions
Lifetime (tCO ₂ e)	2,403,840	2,297,355	- 106,485
Annual (tCO ₂ e)	120,192	114,868	- 5,324

112. The introduction of road safety and GHG emissions, owing to traffic net benefits will result in positive NPV and EIRR to rehabilitate and maintain communal roads and the MDK section. The road safety net benefits will contribute to producing better economic and financial results in NPV and EIRR to maintain and rehabilitate rural roads. The inclusion of net benefits from GHG emissions reduction due to improved vehicle fuel efficiency increases the NPV and EIRR for the Mora–Dabanga–Kousseri road segment, but lowers the NPV and EIRR slightly for rural road rehabilitation and maintenance due to the overall increase in traffic demand on these roads. The estimated EIRR is 29.9 percent, and the NPV is US\$240.7 million, with road safety net benefits and costs at 24.2 percent and US\$177.5 million for the GHG emissions on account of traffic, considering the high shadow price of carbon. The inclusion of both road safety and GHG net benefits and costs yields a higher EIRR (estimated at 30 percent) and an NPV estimated at US\$244.1 million, as shown in Table 6.



Table 6: NPV and IRRs with Road Safety and GHG Net Benefits

Road sections	Baseline		Road safety		GHG (High SPC) ^a		Road safety and GHG	
	EIRR (%)	NPV (US\$ M)	EIRR (%)	NPV (US\$ M)	EIRR (%)	NPV (US\$ M)	EIRR (%)	NPV (US\$ M)
MDK (paved)	24.0	154.4	24.0	154.6	24.3	159.0	24.3	159.2
Regional and communal Roads	24.1	19.7	63.3	86.1	23.3	18.5	62.4	84.9
Overall project	24.0	174.1	29.9	240.7	24.2	177.5	30.0	244.1

Note: a. We also estimated the economic and financial indicator using a low shadow price of carbon and finding an overall slightly lower EIRR estimated at 24.1 percent and a slightly lower NPV estimated at US\$175.8 million for the overall project. SPC = Shadow Price of Carbon.

Contribution to Climate Adaptation and Mitigation

113. **The proposed project will enhance the climate resilience of the MDK road segment, of priority regional and communal access roads, and of community infrastructure will contribute to the reduction of GHG emissions throughout its project components.** Under Component 1, the project will rehabilitate the MDK road corridor and priority communal access roads—in specific spots or in full—and develop a strategy and mechanism to deploy maintenance on these roads according to climate resilience standards. Climate resilient enhanced road maintenance encompasses the regular technical inspection of roads, drainage system, and slope stabilization, and the deployment of regular and periodic maintenance to ensure debris removal after a storm event, cleaning of roads and roadside vegetation, among other features. Under Component 1, the project will reconstruct the Tilde Bridge and the Kousseri bypass road to climate resilient standards. Component 1 will deploy the “Green Roads for Water” approach, combining road preservation and efficient water management, especially in areas prone to flooding. However, the rehabilitation of regional and communal access roads is expected to increase travel; therefore, it is estimated that overall, it will increase GHG emissions in selected communal access roads. It should be noted that tree-planting activities along the MDK road segment and communal roads is expected to contribute to emissions reduction from carbon capture and sequestration. Under Component 2, community infrastructure will be selected for rehabilitation and upgrading based on climate resilience needs of refugees and host communities and will be rehabilitated and upgraded to climate resilience standards. Tree planting will provide shade and cooling and is expected to contribute to carbon capture and sequestration. Component 2 will also deploy solar lighting features in local communities, further contributing to climate mitigation. Additional information on how the project will contribute to climate adaptation and mitigation is provided in Annex 2.
114. **The use of the Green Roads for Water concept balances preservation of the road, water resources, landscape, and soil resources.** This approach will integrate water management and landscape protection measures into conventional road construction and maintenance and ensure that road alignments and structures serve both the primary transport function and water management objectives such as water harvesting, flood retention, sedimentation control, and erosion management.
115. **The actions that will be reflected and specified in the updated detailed design of MDK road will help to better manage climate risks to road infrastructure, and simultaneously enable sustainable management of water and more productive use of the land.** The concept of “green roads for water” applies to diverse landscapes and climates like those along the MDK road and its areas of influence, which includes the communal roads included under the project. Experience in the use of this concept shows that multisectoral approaches support local community engagement in implementation and ownership, as well as the sustainability of the activities.



116. **Several activities are expected to be implemented, with the support of local communities.** The converted borrow pits are a good option for water storage in semiarid areas and in flood plains with high groundwater tables. Non-vented road drifts can create water storage in semiarid areas and prevent rivers from braiding. Non-vented drifts can also be used in mountainous areas to prevent the erosion of mountain streams and road/water crossings. Roadside farm ponds can be a critical additional source of water in dry land areas along the road and its zones of influence. They can also be used in wet areas for irrigation and livestock watering during dry spells.
117. **Considering the information included in the updated detailed design (for MDK), which consists of a full build back better and climate resilient road infrastructure, and based on the investments per component, it is estimated that approximately 70 percent of the total project IDA financing will be dedicated to the above climate resilience measures.** This estimation is conservative as it does not include the investment that will be dedicated to climate resilience measures deployed in the selected regional and communal access roads, especially those located in the most climate sensitive areas of the corridor, the investment in climate resilient community infrastructure, nor investments in climate mitigation measures.

(A) Financial Management

118. **Overall FM was assessed to be adequate, with residual risk rated Substantial.** The overall control environment is weak. As a result, the overall risk prior to the mitigation measures was assessed as High. The PIUs will be based in Maroua and staffed with competent consultants to mitigate the FM risks: (i) a PIM, including aspects of FM will be developed; (ii) an internal auditor will be recruited; and (iii) accounting and FM software will be installed. It is expected that the residual risk will still be substantial once the risk mitigation measures are implemented. The FM risks identified, and the proposed mitigation measures are summarized in Annex 1.
119. **Internal control and internal auditing.** Internal control processes and procedures will be specified in the PIM. The manual will include a clear description of initiation and approval processes, the designation of duties and responsibilities, and the reporting arrangements between the key players—such as the Autonomous Sinking Fund - *Caisse Autonome d'Amortissement* (CAA), the Ministry of Public Contracts (MINMAP), PSRDREN, CPR–FC, and the PIUs. The standardized FM Manual of Procedures developed by CAA with World Bank Investment Project Financing (IPF) support will be customized to reflect the specificities of the project. The PIU will make use of the computerized accounting system to capture all project-related transactions. FM officers will be responsible for maintaining all controls to ensure that: (i) the project's funds are used only for the purposes they were intended for in an efficient and economical way; (ii) the preparation of regular, accurate, reliable, and timely financial reports; and (iii) the project's assets are adequately safeguarded.
120. **The PIM will include specific sections for the community infrastructure mechanisms.** It will detail the process of selecting the communities or microprojects, financing them, and accounting for those specific expenses. The PIM will also define the procedures for the activation and implementation of the Contingent Emergency Response Component (CERC).
121. **Financial reporting and monitoring.** Consolidated interim financial reports (IFR) will be prepared and submitted to the World Bank within 45 days of the end of each calendar quarter. The content of the IFR would typically include: (i) the sources and uses of funds by classification of project expenditures, detailed by components and activities; (ii) a comparison of budgeted and actual project expenditures—commitment and disbursement—by date, and for the quarter; (iii) a statement on the use of funds by component or activity; and (iv) a physical progress report on the project's implementation, as deemed appropriate. At the end of



each fiscal year, the project will prepare annual consolidated financial statements that will be subject to external audit.

122. **External auditing.** The annual financial statements prepared by each PIU will be consolidated for the purpose of auditing. An independent and qualified external auditor will be recruited based on terms of reference (ToRs) acceptable to the World Bank. The external audit will be carried out according to International Standards on Auditing (ISA), and will cover all aspects of the implemented project activities. It will include verification of eligibility of expenditures, and physical verification of the goods and services acquired. The project will comply with the World Bank's access to information and disclosure policies by making all disclosable audit reports—opinion reports only—promptly available to the public after receiving them. The audited financial statements, along with the auditor's report and management letter incorporating management's comments, covering any identified weaknesses of internal control and accounting systems, will be submitted to the World Bank within six months of the end of each financial year.
123. **Funds flow and disbursement arrangements.** The flow of funds will rely on the Government of Cameroon's banking arrangements through the CAA. In this regard, the CAA's managing directors will continue to act as public accountants. This includes signing authorization for all means of payment using the automated payments module of the CAA information system for donor financing. Two designated accounts (A and B) will be opened by the CAA at a commercial bank on terms and conditions acceptable to IDA, and will be managed by CAA. Designated account A will be for activities managed by MINTP, and designated account B will be for the activities managed by MINEPAT. Replenishment of the designated accounts will be made against withdrawal applications that are supported by statements of expenditures. Upon project effectiveness, transaction-based disbursements will be used. The option to disburse against unaudited IFRs—also known as report-based disbursements—could be considered, subject to the quality and timeliness of the IFRs submitted to the World Bank and overall FM performance, as it is assessed in due course. The other methods of disbursing funds—reimbursement, direct payment, and special commitment—will also be available for the project. The project will sign and submit withdrawal applications electronically using the e-signatures module accessible from the World Bank's Client Connection website. In addition to the designated accounts, each implementing unit should consider an advance account in a commercial bank to pay for petty cash up to a ceiling level to be defined in the project manual.

(B) Procurement

124. **Regulations.** Procurement for goods, works, non-consulting, and consulting services will be carried out in accordance with the procedures specified in the latest World Bank Procurement Regulations for IPF Borrowers dated November 2020 (Procurement Regulations), the Guidelines on Preventing and Combating Fraud and Corruption in Projects Financed by IBRD Loans and IDA Credits and Grants (revised as of July 1, 2016; Anti-Corruption Guidelines), and provisions stipulated in the Financing Agreement.
125. **The proposed project will use the Systematic Tracking of Exchanges in Procurement (STEP) system.** STEP is a planning and tracking system which would provide data on procurement activities, establish benchmarks, monitor delays, and measure procurement performance.
126. **Capacity assessment.** An assessment of the capacity of the two PIUs (CPR-FC within MINTP, and PSRDREN within MINEPAT) to implement procurement was carried out by the World Bank's procurement specialist during the preparation of the project (see details in Annex 1). The assessment came up with the following findings:
- ***CPR-FC is the implementing unit for all donor-funded projects under MINTP. Its capacity has been overstretched over time resulting in degraded performance.*** The main issues identified are extremely



long procurement processes, poor contract management, and delays in the implementation of activities, which have resulted in low disbursement rates of projects currently under implementation. The procurement risk is therefore considered substantial. Following the assessment’s findings, an action plan was convened with suggested measures to address the inadequacies and risks identified and agreed upon with the recipient.

- **For PSRDREN, the assessment revealed that the agency may have difficulties in preparing realistic procurement plans with realistic budgets.** Staff involved in the project may not have sufficient knowledge of the National Procurement Framework (NPF), or they may risk confusing the current guidelines with previous sets of guidelines. Lack of proficient procurement staff may impede implementing actions on time and in line with the NPF. In addition to administrative routines, inadequate communication and interaction between stakeholders may lead to delays in procurement processes. Other difficulties that may be experienced are corruption risks in the procurement of high-value contracts, weaknesses in contract management, and poor filing, which can lead to loss of documents. The assessment’s findings led to an action plan with suggested measures to address the inadequacies and risks identified and agreed upon with the recipient. The mitigation measures and the action plan are provided in Annex 1.

127. The overall procurement risk is Substantial after the implementation of the proposed mitigation measures.

These measures include: (i) hiring, on a competitive basis, a dedicated procurement specialist to be assigned to PSRDREN, and a procurement assistant who is experienced and familiar with World Bank procurement procedures and policies to be assigned to CPR-FC; (ii) training all project staff involved in procurement in the World Bank’s procurement regulations and in contract management; (iii) developing a section on procurement procedures as part of the PIM, to clarify the roles of each team member involved in the procurement process; (iv) developing contract management plans for prior-review contracts; and (v) improving the filing system and the use of STEP to ensure compliance with the World Bank procurement filing manual.

128. A Project Procurement Strategy for Development (PPSD) and a draft Procurement Plan detailing the first 18 months of implementation have been prepared and approved prior to negotiations.

The PPSD has been developed to analyze the key features of the project and related procurement risks and opportunities, building on the lessons learned from the closed CEMAC-TTFP and other similar projects. Over 90 percent of the total value of acquisitions and works planned as part of the implementation of the project (US\$300 million equivalent) will be used for contracts for road infrastructure works including the MDK Corridor, the Tilde Bridge, and the feeder roads. There is a market with qualified national and international contractors to undertake the infrastructure works under the protection of the project’s security management framework. During implementation, the PPSD and procurement plan will be updated as required, at least annually for procurement plan, to reflect actual program implementation needs and improvements in institutional capacity. A contract management plan must be completed upon signature of each prior review contract.

C. Legal Operational Policies

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



9. **Projects on International Waterways OP 7.50.** This policy is triggered because the socio-economic infrastructure under Component 2 will involve the use of aquifers connected to the Lake Chad system which is shared between Algeria, Cameroon, CAR, Chad, Libya, Niger, Nigeria, and Sudan. The project will not adversely change the quantity or quality of water flows to other riparians, and will not be adversely affected by the other riparians' possible water use. Consequently, an exception to the notification requirement under paragraph 7(a) of the Policy was granted by World Bank management on April 22, 2023. Thus, riparian notification is not required.

D. Environmental and Social

130. **The overall E&S rating is High. The project is rated as Substantial on environmental aspects and High on social issues, owing to its location in an FCV area, the high level of exposure to climate change risks, and the nature of the activities to be implemented.** The project will finance full rehabilitation of the 205 km MDK road, the construction of bridges and bypasses, a selection of rural roads, and some social infrastructure. For this project, eight Environmental and Social Standards (ESS) are relevant. Only ESS7 on Indigenous Peoples, and ESS9 on Financial Intermediaries are not relevant.

131. **The Environmental risk of the project is considered Substantial.** The major works under Component 1 involve, among others (i) the opening and operation of rock quarries and lateritic sites for materials supply; (ii) the mobilization of heavy civil works equipment, with safety risks related to the traffic generated by road or bridge projects; (iii) a significant mobilization of workers with a risk of exposure to OHS issues as well as diseases such as COVID-19, endemic diseases such as meningitis and cholera, and exposure to venomous snake bites, or any other predators in the agroecological area of the project; (iv) the pressure on poor existing resources, for example water and energy supply for the project in desert areas; (v) security risks due to the location of the project in an FCV area. This may lead to poor E&S monitoring of the project related to difficulties in finding qualified personnel to work in a red classified area, biodiversity risks related to the proximity of the project's activities to two protected areas: Waza National Park and Kalamaloue National Park. However, these risks are classified as Substantial because the project intends to rely on certain infrastructures inherited from the previous project—for example, contractors' bases and quarries—and feedback from experiences acquired on this same section by the implementing agency. The small community infrastructures to be supported under Component 2 may have low and limited adverse environmental impacts regarding noise, pollution of air, soil, and water.

132. **Under the environmental and social management framework (ESMF⁶⁰), it was highlighted that the project is likely to cause serious damage to the environment,** including: (i) the risk of poaching in protected areas to supply project staff with bushmeat; (ii) loss of vegetation cover, and risk of encroachment on protected areas; (iii) flood risks; (iv) risk of various types of pollution; (v) risk of accidents at work and damage to the occupational health of employees; and (vi) the risk of traffic accidents. The positive impacts identified include: (i) landscape and ecosystem restoration to build climate and economic resilience; and (ii) the reduction of GHGs through the improvement of mobility conditions, the reduction of travel times, the promotion of eco-consumption, ecomanagement, recycling, and recovery approaches through the training of beneficiaries for capacity building.

133. **The ESMF proposed several measures to be implemented during the implementation of the various subprojects.** These include: (i) the mobilization of an E&S safeguards team within the PIU, including a specialist in environmental safeguards; (ii) the development of E&S screening for all subprojects; (iii) carrying out

⁶⁰ ESMF was prepared and disclosed in the World website and in country on May 4, 2023.

http://operationsportalwswi.worldbank.org/project/20/P178207/Documents/Implementation/Files/CGES%20PACRI%20Version_24%20avril%202023.pdf



environmental and social impact assessments (ESIA), and an Environmental and Social Impact Notice —*Notice d'Impact Environmental et Social*—resettlement plan to be associated with each subproject; (iv) the implementation of E&S avoidance, mitigation, and compensation measures; (v) capacity building of actors involved in the project; and (vi) the implementation of appropriate E&S measures.

134. **The social risk rating is High and is related to the following factors:** (i) Insecurity in the project area is quasi-endemic, and the project may contribute to exacerbating conflict, crime, or violence that in turn may induce additional risks to the safety of the project workers and the community; (ii) the project is collaborating with the Cameroonian Army for security protection. This is likely to cause negative risks related to violation of human rights on beneficiary communities as well as risks of violence against women and girls, including SEA and (SH) induced by the presence of the army and terrorist groups in the project area. Attacks by Boko Haram targeting the armed forces could also increase the insecurity of project workers and the community, as they might be associated with exactions committed by the army; (iii) potential exclusion of the most vulnerable populations from the project's engagement and benefits. The dynamics of conflict owing to the Boko Haram insurgency have severely disrupted economic activities such as agriculture, fishing, livestock, and trade, and the movement of people and goods in the area concerned. Moreover, the soil degradation or desertification, and the decrease in rainfall has contributed to enhancing the vulnerability of the population; (iv) rehabilitation of the 205-km MDK road will cause some economic displacement because of the presence of small informal businesses of the population that are located in the right-of-way; and (v) the inevitable labor influx on account of the project's location in a humanitarian area and the need to involve a number of workers, both manual and high-profile staff at the operational level, from abroad because the scarcity in the area due to the internal displacement that may lead to significant SEA and SH.
135. **Three groups of measures address these risks: the use of suitable E&S management instruments; appropriate institutional arrangements; and training.** The project drafted, and has consulted upon an ESIA–ESMP for the MDK section of 205 km of National Road 1 (RN1), including reconstruction of the 180-meter Tilde Bridge, and the rehabilitation of the 7-km Kousseri bypass road, and an environmental and a social management framework (ESMF) for the project covering E&S risks and potential impacts associated with all of the above components, and in accordance with the relevant standards. This includes a GBV–SEA–SH assessment and a GBV–SEA–SH action plan, as well as a CERC section. The following ESF–E&S instruments have been disclosed prior to project appraisal: (i) Environmental and Social Commitment Plan (ESCP)⁶¹; (ii) an updated ESIA–ESMP⁶², including a biodiversity management plan, for the 205-km MDK road, including the reconstruction of the 180-meter Tilde Bridge, and the rehabilitation of the 7-km Kousseri bypass road and an updated ESMF for the project; (iii) a resettlement plan⁶³ for the Mora–Dabanga–Kousseri section of 205 km of National Road 1; (iv) a resettlement

⁶¹ The ESCP was prepared and disclosed in the World Bank website and in country on May 25, 2023.

https://spfilesapi.worldbank.org/services?I4_SERVICE=VC&I4_KEY=P178207&I4_DOCID=c4f6bc7c-9f87-4573-954e-bb69f2d6e4e1

⁶² The ESIA/ESMP was prepared and disclosed in the World website and in country on May 4, 2023.

http://operationsportalwswi.worldbank.org/project/20/P178207/Documents/Implementation/Files/CGES%20PACRI%20Version_24%20avril%202023.pdf

⁶³ The resettlement plan was prepared and disclosed in the World website and in country on May 3, 2023.

https://operations4.crm.dynamics.com/WebResources/ops_projectdocumentdownload?data=0c2dfbaf-d4e9-ed11-a7c6-0022482804f3



policy framework⁶⁴ (RPF); (v) labor management procedures⁶⁵ (LMP); (vi) a stakeholder engagement plan⁶⁶ (SEP), including a grievance redress mechanism; and (vii) a security risk assessment and a security management plan⁶⁷ for the project. Each of the two PIUs will appoint or hire an environmental specialist and a social specialist to provide support in the environmental, social, and occupational health and safety (ESHS) management, monitoring, and reporting as per the ToR vetted by the World Bank. The ESMF includes the training program.

V. GRIEVANCE REDRESS SERVICES

136. **Grievance redress.** Communities and individuals who believe that they are adversely affected by a project supported by the World Bank may submit complaints to existing project-level grievance mechanisms, or to the World Bank's grievance redress service (GRS). The GRS ensures that complaints received are promptly reviewed to address project-related concerns. Project-affected communities and individuals may submit their complaint to the World Bank's independent accountability mechanism (AM). The AM houses the inspection panel—which determines whether harm occurred, or could occur as a result of World Bank's noncompliance 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 World Bank management, and after management has been given an opportunity to respond. For information on how to submit complaints to the World Bank's GRS, please visit <http://www.worldbank.org/GRS>. For information on how to submit complaints to the World Bank's accountability mechanism, please visit <https://accountability.worldbank.org>.

VI. KEY RISKS

137. **The systematic operations risk-rating tool (SORT) was used to evaluate potential risks associated with the project. The overall risk rating for the proposed project is High**, mainly due to the risks associated with: (i) political and governance risks; (ii) institutional capacity for implementation and sustainability; (iii) fiduciary risks; (iv) E&S risks; (v) stakeholders; and (vi) security issues.

138. **Political and governance—Substantial.** The Far North region has an active crisis—the Boko Haram crisis—and it is uncertain if this conflict will worsen or stabilize in the near future. Further, intra- and intercommunal conflicts arise with recurrent clashes between pastoralists and farmers, or between farmers, exacerbated by an inflow of refugees. Given this uncertainty, the effectiveness of the proposed interventions will remain a concern, and will be mitigated by allowing flexibility in resource allocation across the components and geographic locations, as well as by sequencing implementation into new areas as security improves—or retreating if security situation deteriorates.

139. **Macroeconomic—Moderate.** This is due to the challenging medium-term outlook globally and regionally, which

⁶⁴ The RPF was prepared and disclosed in the World website and in country on May 3, 2023.

⁶⁵ The LMP was prepared and disclosed in the World website and in country on May 4, 2023.

https://operations4.crm.dynamics.com//WebResources/ops_projectdocumentdownload?data=dc4aabb0-fae9-ed11-a7c6-002248280df0

⁶⁶ The SEP was prepared and disclosed in the World Bank website and in country on May 3, 2023.

https://operations4.crm.dynamics.com//WebResources/ops_cpdocumentdownload?data=ce818d85-afe9-ed11-a7c6-0022481fc25e

⁶⁷ The executive summary was disclosed on May 3, 2023.

https://operations4.crm.dynamics.com//WebResources/ops_projectdocumentdownload?data=2ad1de82-d9e9-ed11-a7c6-0022482a9f2b



may increase volatility and fragility in Cameroon. The prevailing situation was preceded by Cameroon's already deteriorating fiscal and external balances between 2012 and 2016, challenging macroeconomic stability, and exposing countries to greater vulnerability due to oil price changes. Even though the macroeconomic situation of the countries continues to be very vulnerable, risks for the project's financing are mitigated through ring-fenced external funding.

140. **Sector strategies and policies—Moderate.** The sustainability of road investments may be reduced due to poor programming of maintenance resources. The Government has developed a Letter of Sector Policy (LSP) dated May 9, 2023, that reflects its strategy and long-term commitment regarding road asset management and maintenance, management of security issues for road works, implementation capacity of the road sector including other strategic issues such as the inclusion of climate resilience in the road sector. The LSP is included in the project files. Further, the project includes financing for an LIPW program to maintain the 200 km of access roads to be rehabilitated.
141. **Technical design of project—Low.** The project design involves rehabilitation of existing infrastructure using established technical standards that have already been used in previous operations. The technical design of other project components will also benefit from the experience of previous operations, such as the CEMAC–TTFP and PROLAC. However, the PIU lacks experience in designing and implementing climate-resilient road infrastructure. Such risks will be mitigated through the recruitment of a consultant with the requisite experience.
142. **Institutional capacity for implementation—Substantial.** This risk is rated substantial owing to conflicts in the responsibilities of the line ministries and the MINMAP, which has often resulted in duplication, inefficiencies, and delays in decision making. These issues are being addressed under the ongoing World Bank portfolio reviews, and ensuing lessons are applied to the proposed project during appraisal and will be applied at implementation. Institutional capacity risk will be mitigated by initiating procurement of the major road works well before Board presentation, so that works can be started soon after project effectiveness. The mandate of the special tender boards for the two implementation agencies will be extended and adapted in order to facilitate smooth implementation. In addition, the Government of Cameroon plans to use a retroactive financing mechanism, the arrangements of which were discussed at appraisal, and formalized during negotiations.
143. **Sustainability—Substantial.** This is due to the poor planning of maintenance resources and the lack of experience of the PIU in designing and implementing climate-resilient road infrastructure. To mitigate this risk, a strong focus on the sustainability of investments in the capacity building component will help to institutionalize maintenance and asset management.
144. **Fiduciary—High.** This is owing to: (i) the risk of implementing FM arrangements with unsatisfactory FM performance for previous World Bank-financed projects undertaken by MINTP; and (ii) the risk linked with the lack of experience of the new fiduciary PIU to be established under the MINEPAT. The procurement risk is rated High due mainly to: (a) shortcomings in the coordination of stakeholders in the framework of World Bank-financed projects, such as the strengthening public sector effectiveness and statistical capacity project; (b) administrative routine, which can delay procurement processes and affect project implementation; (c) insufficient knowledge of the new procurement framework, which may be confused with old guidelines and national procurement procedures, could lead to rigidity in procurement decisions, mis-procurement, or delays in procurement; and (d) the risk of coordination failure between the two PIUs located at MINEPAT and MINTP. These risks will be mitigated through robust capacity building, supervision of project staff, and modification of institutional arrangements at the procurement level.
145. **Environmental—Substantial.** This is mainly linked to Components 1 and 2 with civil works: (i) the full rehabilitation of the 205 km of the MDK road; the reconstruction of 180 meters of the Tilde Bridge on the same



road; (ii) the rehabilitation of 7 km of the Kousseri bypass road in a dense urban area, with the most exposure of populations to the undesirable effects of the work (in particular dust, noise, disruption of activities; and (iii) the rehabilitation of 200 km of rural access roads, and small community infrastructures along the area of influence of the project. In principle, they may have low and limited adverse environmental impacts regarding noise and/or pollution of air, soil, and water. Overall, the project will mostly have several positive impacts on climate resilience and the communities.

146. **Social—High.** The project area presents a particular social sensitivity due to the ongoing presence of Boko Haram, the presence of multiple Cameroonian Armed Forces, the Multinational Joint Task Force (MNJTF), the large number of refugees, the distinct religious, political, and ethnic composition of the local communities and the historical isolation that the population feels, along with a sense of being forgotten by the rest of the country. In this context, there are significant social risks linked to the increase of military presence in an already heavily militarized zone; the limited presence of the central and local government including police; and the Boko Haram attacks and reprisals against local communities along the road. In the past, allegations of improper behavior by the military have been reported by several civil society and international organizations, including Amnesty International. A report by Amnesty International, “Right Cause, Wrong Means: Human Rights Violated and Justice Denied in Cameroon’s Fight Against Boko Haram” (July 14, 2016), alleges human rights abuses by the Cameroonian army, including brutal treatment of civilians, arbitrary arrests of civilians suspected of collaboration or of sympathizing with Boko Haram, disappearances, and torture of suspects. Many arrests have been related to the enforcement of the Anti-Terrorism law passed in December 2014. Mitigation measures are presented below.
147. **Stakeholder—Substantial.** The project will be implemented in a conflict area with numerous stakeholders, including a considerable number of refugees, distinct religious groups, the political and ethnic composition of the local communities, NGOs, and project-affected persons all situated along the road. During project implementation, the government will consult with stakeholders to garner their support for the project.
148. **Security risks—High.** The project area is still in an active zone of military conflict—Operation Alpha—where the Cameroonian Armed Forces and the Multinational Mixed Force have been conducting intensive operations to defeat Boko Haram insurgents since 2015. Some of the 19 villages along the MDK road section to be rehabilitated have been the target of numerous Boko Haram attacks, including targeted killings, kidnappings, theft, and pillaging. The data communicated by United Nations Department of Safety and Security (UNDSS) show a dramatic reduction in the number of suicide attacks, but an increase in looting along the corridor. Boko Haram may target the food, fuel, and construction supplies brought by contractors or suppliers. Both those executing the works and the population living along the road will be exposed to such risks. Although it is not possible to accurately predict how Boko Haram will respond to the intensive deployment of workers on the road, it is possible that attacks and attempted attacks will increase. Boko Haram may also target members of the local communities who are perceived as supporting the project by working, or providing goods and services to workers and contractors.
149. **Security arrangements for the works, to be fully financed by the Government of Cameroon, have been agreed on, and will be detailed in the DSAT—whereby the MINDEF is responsible for providing overall security through the following arrangements:**
 - (i) All of the workers will be accommodated in the secured basecamps at Siaba, Mora, and Waza, constructed under the CEMAC–TTFP, and special arrangements will be made for working hours to allow workers to return to the basecamps before nightfall.
 - (ii) The Maroua military base, located about 60 km from the start of the road in Mora, will provide military



personnel to staff a permanent security unit (DSAT), which will protect the project site and contractors' personnel and equipment.

- (iii) The Security Monitoring Commission established under CEMAC–TTFP, will be responsible for monitoring security conditions in the project area. Established in Maroua, and chaired by the governor of the Far North region, it is staffed with senior military officials.

150. **To mitigate the social risk related to the presence of the military**, the following measures will be implemented:

- (a) The selection of the military personnel assigned to guard the works will be subjected to high-standard rules, and MINDEF is committed to immediately removing any military personnel who are involved in any alleged violation or abuse.
- (b) The Government of Cameroon will ensure that all military personnel assigned to guard the works will receive the required training in international humanitarian law, civilian-military engagement, GBV, and other relevant areas prior to the commencement of any works.
- (c) MINTP and MINEPAT will implement a social communication strategy for the engagement of local communities, refugees, nongovernment organizations, media, and authorities in the project area.
- (d) A transparent grievance redress mechanism will be established prior to the commencement of any works, and will be maintained at all times to actively monitor the implementation of the works.
- (e) A TPM consultant will be engaged by the World Bank to monitor civilian-military engagement, incidents of GBV, and to detect any occurrence of child or forced labor in connection with the project activities. The TPM shall have recognized experience in social auditing, and M&E of development projects in a conflict-affected zone.
- (f) The Government of Cameroon shall (i) ensure that local authorities will fully collaborate with the TPM consultant; (ii) review periodic reports of the TPM on grievances received, redress mechanisms, and any feedback provided; and (iii) promptly implement or cause relevant local authorities to implement the recommendations provided in the reports of the TPM.

151. **Other: Refugee protection—Substantial.** The World Bank, in consultation with UNHCR, has confirmed that Cameroon's protection framework is adequate for accessing funding under the IDA20 WHR. UNHCR has provided the World Bank with an overall positive assessment of Cameroon's protection framework, indicating that Cameroon has adopted comprehensive humanitarian and development programs aimed at mitigating protection risks faced by refugees. However, a risk may arise that Cameroon's asylum space and refugee policies could become more restrictive in response to the strain on services and the natural environment; continuing refugee population growth; general insecurity; and political pressure. Additional refugee-specific risks include the high proportion of women and girls, and other vulnerable people within the refugee population, which poses specific protection challenges, including that of GBV; challenges to the ongoing allocation of land to refugees; and administrative and informal barriers for refugees seeking to access productive employment, finance, and market opportunities. These risks are being managed by better understanding the challenges and how World Bank operations can mitigate them. In 2016, the World Bank undertook analytic studies to assess socioeconomic conditions across refugee and host communities in Cameroon's Adamaoua, Eastern, and Northern Regions. The assessment examined GBV; deforestation and environmental management; socioeconomic issues; informing refugee policy; and access to finance and value chains. These risks are being managed jointly through effective in-country coordination mechanisms which include UNHCR, the Prime Minister's Office, development and humanitarian partners, and other departments of the Government of Cameroon. The World Bank is working with UNHCR to provide an effective platform for ensuring joint management of the risks, including protection issues, as well as with the government and other humanitarian and development organizations. The project will work through these forums and transport sector working group meetings. This project will contribute to



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alleviating the formal and informal barriers to economic opportunities, including infrastructure, for refugees. The World Bank will work closely with UNHCR to monitor the protection environment continually, throughout project implementation.



VII. RESULTS FRAMEWORK AND MONITORING

Results Framework

COUNTRY: Cameroon

Enhancing Connectivity and Resilience in the Far North of Cameroon for Inclusiveness Project

Project Development Objectives(s)

The proposed Project Development Objective (PDO) is to: (i) enhance connectivity and climate resilience along the MDK road section; and (ii) improve access to basic socioeconomic infrastructure in selected districts of the Far North of Cameroon.

Project Development Objective Indicators

Indicator Name	PBC	Baseline	Intermediate Targets			End Target
			1	2	3	
Enhance connectivity and climate resilience along the MDK road section.						
Average travel time between Mora and Kousséri (Hours)		8.00	6.00	4.00	3.00	3.00
Length of MDK road vulnerable to identified climate change hazards (floods and heat). (Kilometers)		205.00	150.00	100.00	65.00	0.00
The share of people with access to an all-weather passable road within five kilometers of the MDK road section (modified road access index). (Percentage)		80.00	84.00	88.00	90.00	91.00
Number of refugees and host communities population with access to an all-weather passable road within five		0.00	60,000.00	80,000.00	100,000.00	123,000.00



Indicator Name	PBC	Baseline	Intermediate Targets			End Target
			1	2	3	
kilometers of the MDK road section. (Number)						
Share of women with improved access to an all-weather passable road within five kilometers of the MDK road section. (Percentage)		0.00	25.00	30.00		43.00
Share of beneficiaries reporting satisfaction with the socio-economic infrastructures (Percentage)		0.00	55.00	65.00		85.00
Improve access to basic socioeconomic infrastructure in selected districts of the Far North						
Number of schools along the Mora–Dabanga–Kousséri road section with improved road access (Number)		0.00	20.00	30.00		41.00
Number of schools around refugee camps with improved road access (Number)		0.00	5.00	8.00		10.00
Number of health centers along the Mora–Dabanga–Kousséri road section with improved road access (Number)		0.00	5.00	15.00		20.00
Number of health centers around around refugee camps with improved road access (Number)		0.00	1.00	2.00		3.00
Number of markets along the Mora–Dabanga–Kousséri road		0.00	2.00	4.00		6.00



Indicator Name	PBC	Baseline	Intermediate Targets			End Target
			1	2	3	
section with improved road access (Number)						
Number of markets around refugee camps with improved access to markets (Number)		0.00	1.00	2.00		3.00

Intermediate Results Indicators by Components

Indicator Name	PBC	Baseline	Intermediate Targets				End Target
			1	2	3	4	
Component 1: Road Rehabilitation and Maintenance Works							
Length of road rehabilitated with safety and climate change resilient features along the MDK road section (Kilometers)		0.00	100.00	132.00			212.00
Length of bridge rehabilitated (Meter(m))		0.00					180.00
Road safety measures introduced along the Mora-Dabanga-Kousseri (Yes/No)		No					Yes
Climate change resilient features introduced along the Mora-Dabanga-Kousseri (Yes/No)		No					Yes
Length of road connecting refugees camps and host communities rehabilitated with safety and climate change		0.00	25.00	50.00	75.00	100.00	150.00



Indicator Name	PBC	Baseline	Intermediate Targets				End Target
			1	2	3	4	
resilient features (Kilometers)							
Kilometer of communal and regional roads maintained and rehabilitated with safety and climate change resilient features along the MDK (Kilometers)		0.00	20.00	40.00			50.00
Component 2: Improved community infrastructure in selected areas and refugees camps/host communities							
Number of schools constructed or rehabilitated along the MDK road (Number)		0.00	5.00	10.00	15.00		20.00
Number of health centers constructed or rehabilitated along the MDK road (Number)		0.00	3.00	5.00	7.00		12.00
Number of cattle markets constructed or rehabilitated along the MDK and roads connecting refugees camps and host communities (Number)		0.00	2.00	4.00			5.00
Construction or rehabilitation of community multimedia centers (Number)		0.00	2.00				3.00
Number of women’s groups supported through trainings and equipment provision (Number)		0.00					5.00
Storage facilities rehabilitated/constructed reserved/leased for women (Percentage)		0.00	20.00	30.00			50.00



Indicator Name	PBC	Baseline	Intermediate Targets				End Target
			1	2	3	4	
Number of water points constructed or rehabilitated with improved conditions (Number)		0.00	15.00	20.00			30.00
Component 3: Capacity Building, Project Management, and Citizen Engagement							
Road safety audits conducted (Yes/No)		No					Yes
Proportion of complaints addressed timely (Percentage)		0.00					100.00
Number of students enrolled in the internship Program within the project and MINTP (Number)		0.00	15.00	30.00			45.00
Percentage of women from the internship Program who report being employed 12 months after they completed the internship (Percentage)		0.00	30.00				50.00
Share of women enrolled in the internship Program within the project and MINTP (Percentage)		0.00	30.00				50.00
Institutional capacity of the decentralized PIUs of MINTP and MINEPAT (PSRDREN) improved (Yes/No)		No	Yes				Yes



Monitoring & Evaluation Plan: PDO Indicators

Indicator Name	Definition/Description	Frequency	Datasource	Methodology for Data Collection	Responsibility for Data Collection
Average travel time between Mora and Kousséri	This indicator measures vehicles travel time between Mora and Kousseri.	Annually	Traffic Survey and M&E Reports. Open source from Geospatial Data (e.g., Open Street Map)	Traffic Survey	Project Implementation Unit
Length of MDK road vulnerable to identified climate change hazards (floods and heat).	Measures the length of the MDK road corridor that is at risk of flooding and extreme heat, which are projected to increase in frequency and intensity with climate change.	Annually	Implementation reports.	Verification of implementation of proposed climate resilience features.	Project implementation Unit and MINTP.
The share of people with access to an all-weather passable road within five kilometers of the MDK road section (modified road access index).	This indicator measures the number of beneficiaries with improved access to an all-weather passable road within five kilometers of the MDK road section. Climate change impacts are expected to affect road	Annual	GIS database prepared during project preparation	The methodology will consist on using population distribution to calculate the share of population located within a 5km-buffer zone with access to an all-weather	Project Implementation Unit



	passability during the rainy season.			passable road within five kilometers of the MDK road section	
Number of refugees and host communities population with access to an all-weather passable road within five kilometers of the MDK road section.	Number of refugees and people in host communities with access to an all-season road. Climate change impacts are expected to affect road passability during the rainy season.	Yearly	Surveys UNHCR data	The methodology will consist on using survey to calculate the number of refugees and host communities population located within a 5km- buffer zone of each road section rehabilitated and maintained with climate resilience features.	Project Implementation Unit
Share of women with improved access to an all-weather passable road within five kilometers of the MDK road section.	This sub-indicator measures the percentage of women with improved access to an all-weather passable road within five kilometers of the MDK road section.	Annual	M&E report	Compute the percentage of women with improved access to an all-weather passable road within five kilometers of the MDK road section.	Project Implementation Unit
Share of beneficiaries reporting satisfaction with the socio-economic infrastructures	This indicator measures population reporting satisfaction with road conditions along the Mora-	Three time (baseline, mid-term, and at the	Survey	Rely on surveys to measure the share of the population reporting satisfaction	Project Implementation Unit



	Dabanga-Kousseri road section.	end of the project)		with road conditions along the mora-Dabanga-Kousseri road section.	
Number of schools along the Mora–Dabanga–Kousséri road section with improved road access	Number of schools along the Mora–Dabanga–Kousséri road section with improved road access	Yearly	Monitoring and Evaluation Reports	Count of the number of schools along the Mora–Dabanga–Kousséri road section with improved road access	Project Implementation Unit
Number of schools around refugee camps with improved road access	Number of schools around refugee camps with improved road access	Yearly	M&E and consultant reports	Count of the number of schools around refugee camps with improved road access	Project Implementation Unit
Number of health centers along the Mora–Dabanga–Kousséri road section with improved road access	Number of health centers along the Mora–Dabanga–Kousséri road section with improved road access	Yearly	M&E and consultant reports	Count of the number of health centers along the Mora–Dabanga–Kousséri road section with improved road access	Project Implementation Unit
Number of health centers around around refugee camps with improved road access	Number of health centers around around refugee camps with improved road access	Yearly	M&E consultant reports	Count of the number of health centers around around refugee camps with improved road access	Project Implementation Unit
Number of markets along the Mora–	Number of health centers	Yearly	M&E and	Count the number of	Project Implementation



Dabanga–Kousséri road section with improved road access	along the Mora–Dabanga–Kousséri road section with improved road access		consultant reports	health centers along the Mora–Dabanga–Kousséri road section with improved road access	Unit
Number of markets around refugee camps with improved access to markets	Number of markets around refugee camps with improved access to markets		M&E and consultant reports	Count the number of markets around refugee camps with improved access to markets	Project Implementation Unit

Monitoring & Evaluation Plan: Intermediate Results Indicators

Indicator Name	Definition/Description	Frequency	Datasource	Methodology for Data Collection	Responsibility for Data Collection
Length of road rehabilitated with safety and climate change resilient features along the MDK road section	Number of Kilometers of MDK road section rehabilitated and upgraded to climate change resilient standards.	Annual	Project monitoring and evaluation reports	Progress reports of construction and supervision consultants	Project Implementation Unit
Length of bridge rehabilitated	Length of bridge rehabilitated (Meters)	Annual			Project Implementation Unit
Road safety measures introduced along the Mora-Dabanga-Kousseri	As part of works contract, road safety features will be provided for urban centers and populated zones to	Annual		Project Implementation Unit	



	segregate pedestrians from vehicle traffic.				
Climate change resilient features introduced along the Mora-Dabanga-Kousseri	As part of works contract, climate change resilient features will be provided along the MDK road section	Annual			Project Implementation Unit
Length of road connecting refugees camps and host communities rehabilitated with safety and climate change resilient features	Number of kilometers of roads connecting refugees camps and host communities, rehabilitated and upgraded to climate change resilient standards	Semi-annually	Monthly and quarterly progress reports	Progress reports of construction and supervision consultants	Project Implementation Unit
Kilometer of communal and regional roads maintained and rehabilitated with safety and climate change resilient features along the MDK	Number of kilometers of regional and communal roads rehabilitated and maintained to climate change resilient standards.	Annual	Consultants and mission control progress reports	Reports of construction and supervision consultants	Project Implementation Unit
Number of schools constructed or rehabilitated along the MDK road	Number of schools constructed or rehabilitated along the MDK road	Annual	Consultant reports	M&E and consultant reports	Project Implementation Unit
Number of health centers constructed or rehabilitated along the MDK road	Number of health centers constructed or rehabilitated	Annual	M&E report Consultant reports	Number of health centers constructed or rehabilitated	Project Implementation Unit
Number of cattle markets constructed or rehabilitated along the MDK and roads connecting refugees camps and host communities	Construction or rehabilitation of cattle markets along the MDK road and roads connecting refugees camps	Annual	M&E reports Consultant reports	Count of the number of cattle markets constructed along the MDK road section and roads connecting refugees and host	Project Implementation Unit



				communities	
Construction or rehabilitation of community multimedia centers	Number of community multimedia centers created and equipped with computers, a mini Wi-Fi network, payment terminals; etc.) and training for local communities.	Annual		Count of the number of community multimedia centers constructed or rehabilitated	Project Implementation Unit
Number of women’s groups supported through trainings and equipment provision	Number of women’s groups supported through trainings and equipment. Specific activities aiming at enhancing women’s economic empowerment and contributing to closing gender gaps in employment will be included.				Project Implementation Unit
Storage facilities rehabilitated/constructed reserved/leased for women	Number of storage facilities constructed or rehabilitated with improved conditions and reserved/lease to women	Annual	M&E and consultant reports	Count of the number of storage facilities constructed or rehabilitated with improved conditions and reserved/lease to women	Project Implementation Unit
Number of water points constructed or rehabilitated with improved conditions	Number of water points constructed or rehabilitated with improved conditions	Yearly	M&E and consultant reports	Count of the number of water points constructed or rehabilitated with	Project Implementation Unit



				improved conditions	
Road safety audits conducted	Road safety audits carried out on MDK and a selected sample of rural roads	Annual			Project Implementation Unit
Proportion of complaints addressed timely	Complaints processed according to the project GRM	Annual		Number of complaints received and processed in the indicated timeframe divided by the total number of complaints received	Project Implementation Unit
Number of students enrolled in the internship Program within the project and MINTP	This indicator will measure the number of students recruited for the internship program within the MINTP	Yearly	M&E reports	This indicator will measure the headcount of students enrolled in the internship program and that complete it successfully within the MINTP	Product Implementation Unit
Percentage of women from the internship Program who report being employed 12 months after they completed the internship	Percentage of women from the internship Program who report being employed 12 months after they completed the internship	Annual	M&E reports and post-internship surveys		Project Implementation Unit
Share of women enrolled in the internship Program within the project and MINTP	Percentage of women enrolled in the internship Program within the project and MINTP	Annual	M&E reports	Compute the share of women enrolled in the internship Program within the project and MINTP	Project implementation Unit



Institutional capacity of the decentralized PIUs of MINTP and MINEPAT (PSRDREN) improved	Institutional capacity of the decentralized PIUs of MINTP and MINEPAT (PSRDREN) improved	Annual	Project document and M&E	Institutional capacity of the decentralized PIUs of MINTP and MINEPAT (PSRDREN) improved	Project implementation Unit
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ANNEX 1: Implementation Arrangements and Support Plan

A. Financial Management

1. **A financial management assessment (FMA) was undertaken to evaluate the adequacy of the project's FM arrangements in CPR–FC and PSRDREN.** The FMA was carried out in accordance with the Directives and Policy for IPF and the FM Manual for World Bank-Financed Investment Operations effective on March 1, 2010 and reissued on September 7, 2021, and the supporting guidelines. The objective of this assessment was to determine whether the proposed Implementing agencies have acceptable FM arrangements for implementation of the proposed project. in accordance
2. **The overall FM was assessed to be adequate, with residual risk rated Substantial.** The overall control environment is weak. As a result, the overall risk prior to the mitigation measures was assessed as High. To mitigate the FM risks, the PIUs will be based in Maroua and staffed with competent consultants; a PIM that includes aspects of FM will be developed; an internal auditor will be recruited; and an accounting and FM software will be installed. It is expected that the residual risk will be Substantial once the risk mitigation measures have been implemented. The FM risks identified, and the proposed mitigation measures, are summarized in Table A.1.1.

FM and Disbursement Arrangements

3. **Staffing.** Each PIU will be responsible for the day-to-day implementation of project activities. PSRDREN is recruiting its staff, including the FM specialist. An extra accountant will be added to the list of fiduciary staff of the project. The CPR–FC PIU will be strengthened with the addition of an accountant. The roles of the PIU staff will be defined in the PIM and in their job descriptions.
4. **Budgeting.** Overall responsibility for the preparation of an annual work plan and related budget will lie with one of the PIUs or another entity defined by the client. The various steps of budget elaboration and management—preparation, revision, adoption, and execution—will be detailed in the FM section of the PIM. The annual work plan and budget (AWPB) will be prepared for approval by the project's steering committee and submitted to the World Bank for approval or no objection. The budget execution report will be included in the reporting scheme to enable the monitoring of the project's implementation.
5. **Accounting policies and procedures.** The PIU's FM team will assume overall responsibility for maintaining the accounts associated with the project's activities and ensuring that annual financial statements are produced on time, and in accordance with the Organisation for the Harmonisation of Corporate Law in Africa (*Organisation pour l'Harmonisation en Afrique du Droit des Affaires, OHADA*) accounting standards that are applicable in Cameroon. A multiproject, multisite system software will be purchased, and will be customized to fit the project's accounting needs and the purposes for each PIU. It will be used to record the project's transactions and to produce periodic reports for each PIU, as well as a consolidated report.
6. **Internal control and internal auditing.** Internal control processes and procedures will be specified in the PIM. The manual will include a clear description of initiation and approval processes, and the designation



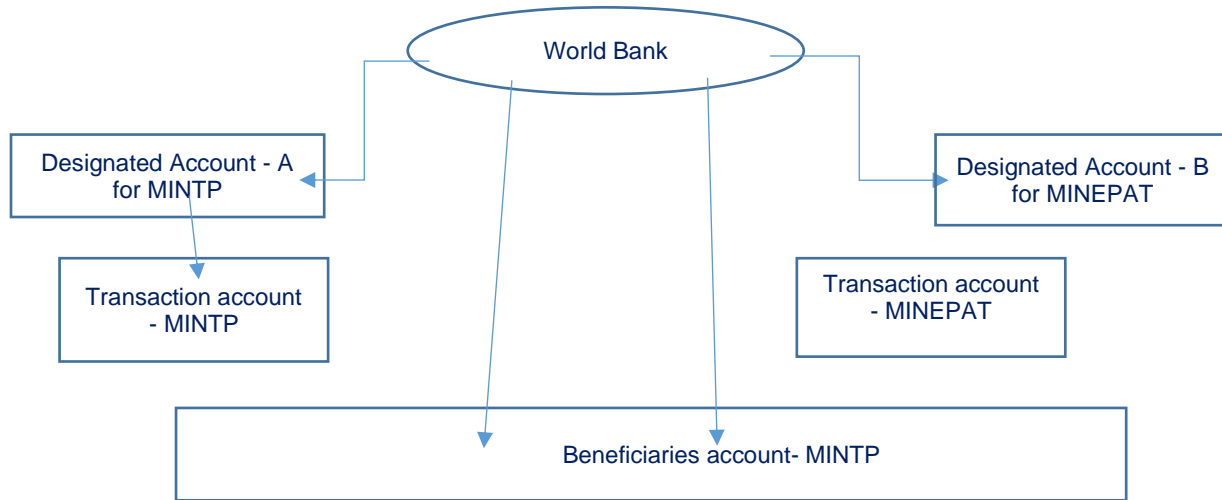
of duties and responsibilities as well as the reporting arrangement between the key players—CAA, the MINMAP, PSRDREN, CPR–FC, and the PIUs. The standardized FM Manual of Procedures developed by CAA with World Bank IPF support will be customized to reflect the specificities of the project. The PIU will make use of the computerized accounting system to capture all project-related transactions. FM officers will be responsible for maintaining all controls to ensure: (i) that the project’s funds are used only for the purposes they were intended in an efficient and economical way; (ii) the preparation of regular, accurate, reliable, and timely financial reports; and (iii) that the project’s assets are adequately safeguarded.

7. **The PIM will include specific sections for the community infrastructures mechanisms.** It will detail the process of selecting the communities or micro projects, financing them, and accounting for those specific expenses. The PIM will also define the procedures for the activation and implementation of the emergency component, CERC.
8. **Financial reporting and monitoring.** Consolidated IFRs will be prepared and submitted to the World Bank within 45 days of the end of each calendar quarter. The content of the IFR would typically include: (i) the sources and uses of funds by classifying project expenditures, detailed by components and activities; (ii) a comparison of budgeted and actual project expenditures—that is, commitment vs. disbursement—by date and for the quarter; (iii) a statement on the use of funds by component or activity; and (iv) a physical progress report on the project’s implementation, as deemed appropriate. At the end of each fiscal year, the project will prepare annual consolidated financial statements that will be subject to external audit.
9. **External auditing.** The annual financial statements prepared by each PIU will be consolidated for the purpose of auditing. An independent and qualified external auditor will be recruited based on ToRs that are acceptable to the World Bank. The external audit will be carried out according to ISA, and will cover all aspects of the implemented project activities, and will include verification of the eligibility of expenditures and physical verification of the goods and services acquired. The project will comply with the World Bank’s access to information, and will disclose policies by making all audit opinion reports disclosable, and promptly available to the public. The audited financial statements, along with the auditor’s report and management letter—incorporating management’s comments—covering any identified internal control and accounting system weaknesses, will be submitted to the World Bank within six months of the end of each financial year.
10. **Funds flow and disbursement arrangements.** The flow of funds will rely on the Government of Cameroon’s banking arrangements through the CAA. In this regard, the CAA’s managing directors will continue to act as public accountants. This includes signing authorization for all means of payment that use the automated payments module of the CAA information system for donor financing. Two designated accounts (A and B) will be opened by the CAA at a commercial bank on terms and conditions acceptable to IDA and managed by the CAA. Designated account A will be for activities managed by MINTP, and Designated account B for the activities managed by MINEPAT. Replenishments to the designated accounts will be made against withdrawal applications supported by statements of expenditures. Transaction-based disbursements will be used on project effectiveness. The option to disburse against unaudited IFRs—also known as report-based disbursements—may be considered, subject to the quality and timeliness of the IFRs submitted to the World Bank and the overall FM performance as assessed in due course. The other methods of disbursing funds—reimbursement, direct payment, and special commitment—will also be available to the project. The project will sign and submit withdrawal applications electronically using the e-signatures



module accessible from the World Bank’s Client Connection website. In addition to the designated accounts, each implementing unit should consider an advance account in a commercial bank to pay for petty cash up to a certain level, to be defined in the project manual (Figure A.1.1.).

Figure A.1.1. Processes for Designated Accounts



11. **Supervision plan.** The project will be supervised on a risk-based approach. Supervision will cover but not be limited to the review of the audit reports and the IFRs, advice to the task team on all FM issues, and field visits. Based on the prevailing residual risk rating of Substantial, the project will be supervised at least twice a year and may be adjusted if the need arises.

12. **Effectiveness condition.** The availability of the PIM will be an effectiveness condition.

13. **Dated covenants.** Within three months after the effectiveness of the project, the PIUs should: (i) acquire the computerized accounting software; (ii) appoint two qualified FM accountants (one for each of the two PIUs), and one FM Chief Accountant based in Maroua for PSRDREN; (iii) recruit an internal auditor for the entire project; and (iv) recruit the external auditors, to begin no later than six months from the project’s effective date.

Table A.1.1. FM Risk Assessment and Mitigation

Risk Factors/Description of Risk	Risk Rating	Risk Mitigating Measures Incorporated into the Project Design	Residual Risk Rating
Inherent Risk:			
Country level Weak governance, low ranking from the transparency international corruption index; activities prone to fraud and corruption may negatively affect the execution of the	High	Donors’ community actions are oriented toward a public financial management (PFM) reform agenda in support of the	High



Risk Factors/Description of Risk	Risk Rating	Risk Mitigating Measures Incorporated into the Project Design	Residual Risk Rating
<p>project activities.</p> <p>Security in the Far North of Cameroun, although under control, remains a concern because of Cameroon’s borders with Chad, and proximity to Boko Haram.</p>		<p>government’s commitment to tackle cross-cutting issues of governance and public.</p>	
<p>Entity level MINTP- CPR–FC: The technical PIU in Maroua (a conflict-affected zone) could increase exposure to fiduciary risks and delay the processing of requests for payment.</p> <p>MINEPAT PSRDREN has no experience in managing government funds and donor-financed activities. In addition to security concerns, this lack of experience could affect project performance. It is in an affected zone.</p>	Substantial	<p>The PIM will define roles, responsibilities, and business standards to avoid delays in implementation.</p> <p>The PSRDREN capacity will be strengthened with an additional FM accountant knowledgeable of the World Bank FM procedures.</p>	Substantial
<p>Project level CPR–FC is based in Yaoundé and the PIU is Maroua. This arrangement could affect the efficiency and effectiveness of the execution of the component.</p> <p>PSRDREN lacks experience in managing projects, which could affect its ability to provide quality and timely information about project execution; also, the overall coordination of responsibilities has not yet been defined.</p>	High	<ul style="list-style-type: none"> • PIM will be developed. • Competent staff will be recruited. • World Bank supervision will be risk-based. • Capacity will be strengthened if required. 	Substantial
Inherent risk	High		High
Control risk			
<p>Budgeting Having two implementing agencies could result in delays in preparing the consolidated budget.</p> <p>PSRDREN’s limited experience with World Bank fiduciary procedures could affect efficient monitoring of the budget and could be challenging.</p> <p>Risk of cost overruns and delayed implementation given the risk of conflict in the area where the project activities will be implemented.</p>	High	<ul style="list-style-type: none"> • The PIM will provide a clear timeline and define responsibilities for the preparation, consolidation, and monitoring of the budgets. • All parties involved in project execution will be clearly briefed/trained on the budget preparation and execution requirements. 	Substantial
<p>Accounting</p> <ul style="list-style-type: none"> • Delays in keeping reliable and auditable accounting records. <p>Inability to generate acceptable consolidated financial data on time.</p>	Substantial	<ul style="list-style-type: none"> • A PIM will be developed. • Staff will be trained. • Software that is suitable for project needs will be used. 	Substantial



Risk Factors/Description of Risk	Risk Rating	Risk Mitigating Measures Incorporated into the Project Design	Residual Risk Rating
<p>Internal fontrols</p> <ul style="list-style-type: none"> • A weak internal control system could result from a lack of clarification of the roles and responsibilities of key players involved in project management. • The nature of the activities—road construction and maintenance, small community infrastructures such as markets, water points, schools, and health centers—is prone to fraud, corruption, and other fiduciary issues. • The large number of players and beneficiaries could result in inefficient management and pose key risks. 	High	<ul style="list-style-type: none"> • The PIM will include the process for effective risk identification and efficient controls. • An internal auditor will be recruited to assess the continuous effectiveness of the controls. • Risk-based FM supervision and capacity-strengthening activities. 	Substantial
<p>Funds Flow</p> <p>Complex funds flow arrangements could delay the processing of requests for payment. Payment is to be made by CAA from Yaoundé.</p> <p>The PIUs lacks funds to pay for pretty cash expenses.</p>	High	<p>PIM to be agreed with all the key actors will provide some information on estimated time to process the requests for payment.</p> <p>Advance accounts for the PIUs to cover targeted cash expenses will be opened.</p>	Substantial
<p>Financial reporting</p> <ul style="list-style-type: none"> • Inaccuracy and delays in the submission of consolidated IFRs. • Delays in submitting consolidated annual project financial statements. 	High	<ul style="list-style-type: none"> • PIM will define the time required to submit reports for consolidation. • Software suitable for the project needs will be purchased, and staff trained in its usage. 	Substantial
<p>Auditing</p> <ul style="list-style-type: none"> • Poor quality audit • Delays in submitting financial audit reports • Delays in the implementation of audit recommendations • Financial audit alone may not be sufficient to get reasonable assurance that fiduciary risks will be mitigated. 	High	<ul style="list-style-type: none"> • ToRs and a short list of audits will be reviewed by the World Bank. • IFRs will be reviewed • Technical audit • Other mitigated measures to be included in the PIM. 	Substantial
<p>Governance and Accountability</p> <ul style="list-style-type: none"> • There is a possibility that internal controls may be circumvented, and/or the abuse of administrative positions. • There may be political interference in the choice of subprojects to finance. • Fraud and corruption is a risk, given the nature of the activities supported by the project. 	High	<ul style="list-style-type: none"> • PIM will include processes to strengthen internal controls. • Competent fiduciary staff will be recruited. • Grievance mechanism • Internal, external audit, and technical audit. 	High
CONTROL RISK	High		Substantial
OVERALL FM RISK	High		Substantial



The FM risk is High, and the residual FM risk is deemed Substantial considering the proposed mitigation measures.

Table A.1.2. FM Action Plan

Action to Be Undertaken	Time Frame	Responsible Body
Recruit an FM accountant based in Maroua under MINTP	March 31, 2023	MINTP
Recruit two FM accountants.	March 31, 2023	PSRDREN/MINTP
Elaborate the PIM	March 31, 2023	MINTP and MINEPAT
Recruit an internal auditor based on ToR, following a transparent process.	April 26, 2023	MINTP and MINEPAT
Recruit an external auditor on the basis of the ToR and short list acceptable internal control system.	June 30, 2023	MINTP and MINEPAT

B. Procurement

14. **Action plan.** Following the assessment’s findings, an action plan with suggested measures to address the inadequacies and risks identified has been convened and agreed upon with the recipient (Table A.1.3).

Table A.1.3. Procurement Risks and Recommended Action Plan

N°	Key Risks	Mitigation Actions	By Whom	By When
1	Procurement staff with experience of implementing procurement actions effectively, on time, and in line with NPF are insufficient.	<ul style="list-style-type: none"> MINTP (CPR-FC) Recruit, on a competitive basis, a junior procurement specialist. MINEPAT (PSRDREN): Recruit, on a competitive basis, a procurement specialist. 	<ul style="list-style-type: none"> MINTP MINEPAT 	<ul style="list-style-type: none"> MINTP: Before effectiveness MINEPAT: Immediately
	The agencies have difficulties in preparing realistic procurement plans with realistic budgets, and they have limited knowledge of the target markets.	<ul style="list-style-type: none"> All agencies: Recruiting an individual consultant who will assist the agencies in the preparation of PPSD. 	<ul style="list-style-type: none"> MINTP 	<ul style="list-style-type: none"> Completed
	Staff involved in the project may not have sufficient knowledge of the NPF, or may risk confusing previous sets of guidelines with the prevailing one.	<ul style="list-style-type: none"> All agencies: Build the capacity of all project staff involved in procurement in the World Bank PRs 	<ul style="list-style-type: none"> MINTP / MINEPAT / World Bank 	<ul style="list-style-type: none"> Before effectiveness



N°	Key Risks	Mitigation Actions	By Whom	By When
2	Administrative routines are constant, and result in procurement delays, potentially affecting project implementation.	<ul style="list-style-type: none"> • MINTP: Update the procedures manual to clarify roles for each team member involved in the procurement process. • MINEPAT: Elaborate a procedures manual. 	<ul style="list-style-type: none"> • MINTP • MINEPAT 	<ul style="list-style-type: none"> • Before effectiveness
4	Poor contract management and administration of contracts	<ul style="list-style-type: none"> • All agencies: Build the capacity of project staff on contract management. • All agencies: Develop contract management plans for prior review contracts. 	<ul style="list-style-type: none"> • MINTP • MINEPAT 	<ul style="list-style-type: none"> • Three months after effectiveness • Throughout the life of the project
5	Low capacity	<ul style="list-style-type: none"> • All agencies: A capacity-building plan for the agency in procurement and management must be developed and implemented. 	<ul style="list-style-type: none"> • MINTP • MINEPAT 	<ul style="list-style-type: none"> • Three months after effectiveness
6	Poor filing, which can lead to loss of documents	<ul style="list-style-type: none"> • Provide a dedicated room for archiving. • Set up a filing system to ensure compliance with the World Bank procurement filing manual. • Upload documents at each stage of procurement in real time, in STEP. 	<ul style="list-style-type: none"> • MINTP • MINEPAT 	<ul style="list-style-type: none"> • Throughout the life of the project

15. **Training, Workshops, Study Tours, and Conferences.** Training activities will include workshops and training, based on individual needs, group requirements, on-the-job training, and hiring consultants to develop training materials and conduct training. All training and workshop activities (other than consulting services) will be carried out on the basis of approved AWPBs or training plans that identify the general framework of training activities for the year, including: (i) the type of training or workshop; (ii) the personnel to be trained; (iii) the institutions that will conduct the training and the reason for selection of these particular institutions; (iv) the justification for the training (that is, how it will lead to effective performance and implementation of the project or the sector; (v) the duration of the proposed training; and (vi) the cost estimate for the training. Reports by the trainees, including the completion of a certificate or diploma upon completion, shall be provided to the project coordinator, saved in the records, and shared with the World Bank, if required. Detailed training and workshop ToRs detailing the nature of the training or workshop, the number of trainees or participants, the duration, the number of staff days (or weeks, or months), the timing, and the estimated cost will be submitted to IDA for review and approval before initiating the process. The selection methods will derive from the activity requirements, the schedule, as well as other circumstances. After the training, the beneficiaries will be requested to submit a brief report indicating what skill or skills they acquired, and how these skills will contribute to enhancing their performance and attaining the project objectives.



16. **Operational Costs.** Operational costs financed by the project will include incremental expenses incurred by the PIUs based on the AWPBs as approved by the World Bank, for the purposes of project implementation, management, and M&E, including reasonable costs for: utilities and supplies; bank charges; communications; vehicle operation, maintenance, and insurance; building and equipment maintenance; public awareness-related media expenses; travel and supervision; and salaries for support, contractual, and temporary staff (but excluding salaries, fees, honoraria, and bonuses for members of the Recipient’s civil service). Such service needs will be procured using the procurement procedures specified in the PIM, and accepted and approved by the World Bank.

17. **Procurement Manual.** Procurement arrangements, roles and responsibilities, methods, and requirements for carrying out procurement, as recommended in the PPSD, shall be elaborated in detail in the procurement manual, which will be a section of the PIM. The Recipient shall prepare the PIM, and agree on it with the World Bank before the effectiveness date.

18. **The thresholds for specific market approaches and procurement methods,** and the World Bank’s prior review requirements are provided in Table A.1.4.

Table A.1.4. Specific Market Approaches and Procurement Methods

No	Expenditure Category	Contract (C) Value Threshold ^a / (US\$ equivalent)	Procurement Method	Contracts Subject to Prior Review/ (US\$ equivalent)
1	Works	C ≥ 5,000,000	Open Competition International Market Approach and Direct Contracting	≥ 10,000,000
		200,000 < C < 5,000,000	Open Competition National Market Approach	None
		C ≤ 200,000	Request for Quotation	None
2	Goods, IT, and non-consulting services	C ≥ 500,000	Open Competition International Market Approach and Direct Contracting	≥ 2,000,000
		100,000 < C < 500,000	Open Competition National Market Approach	None
		C ≤ 100,000	Request for Quotation	None
3	National short list for selection of consultant firms	C < 100,000	For Consulting Services	None
		C ≤ 200,000	For Engineering and Construction Supervision	None
4	International short list for selection of consultant firms	C ≥ 100,000	For Consulting Services	≥ 1,000,000
		C > 200,000	For Engineering and Construction Supervision	≥ 1,000,000
5	Selection of individual consultants	All values	All approaches	≥ 300,000
6	Direct contracting	All values	Direct contracting	As agreed in the Procurement Plan
7	Training, workshops, and study tours	All values	Based on approved AWPBs	As agreed in the Procurement Plan if



No	Expenditure Category	Contract (C) Value Threshold ^a / (US\$ equivalent)	Procurement Method	Contracts Subject to Prior Review/ (US\$ equivalent)
				required

Note: a. These thresholds are for activities identified in the PPSD as low-value or low-risk where the procurement risk is rated Substantial. The thresholds will be revised periodically based on the reassessment of risks. All contracts not subject to prior review will be post-reviewed. Based on country-specific needs and circumstances, shopping thresholds for the purchase of vehicles and fuel may be increased up to US\$500,000.

19. **Procurement Implementation Support.** The World Bank procurement specialists will regularly participate in implementation support missions to assist in monitoring procurement procedures and plans. During the early phase of project implementation, more frequent supervision is envisaged, to ensure that procurement guidelines are being followed and to support capacity building on procurement functions across all PIUs. Additional capacity needs of the clients will be identified and supported by the time of financing.
20. **Procurement Post Review.** Post reviews can be done either by World Bank staff or by consultants hired by the World Bank. They may also be carried out by third parties such as supreme audit institutions, procurement regulatory authorities, consulting firms, NGOs, and others, according to procedures acceptable to the World Bank in order to ascertain compliance with procurement procedures as defined in the legal documents. The procurement post reviews should cover at least 10 percent of contracts that have not been previously reviewed within a financial year. The sampling is risk-based and considers the contract risk rating, to ensure that riskier contracts will constitute a higher proportion of the sample. Post reviews contribute to the project's overall procurement performance rating (based on the post-procurement review rating), and provide a basis for updating the project procurement risk and the risk mitigation plan. The World Bank reserves the right to conduct an independent procurement review at any time up to two years following the closing date of the project.
21. **Oversight and Monitoring Arrangements for Procurement.** The PIM will define the project's internal organization and its implementation procedures. It will include, among other things, all relevant procedures concerning calling for bids, selecting consultants, awarding contracts, handling or managing complaints, and archiving procurement documents. Detailed procurement documentation (for example the PPSD) will be referenced and retained in the project files.



ANNEX 2: Contribution to Climate Adaptation and Mitigation

1. **Cameroon is already experiencing the impacts of climate change and is at high risk for natural disasters such as flooding of urban areas, river and coastal flooding, landslides, erosion, extreme temperatures, and water scarcity.**⁶⁸ These climatic events not only damage assets but also cause traffic disruptions, traffic accidents, and destruction of road signaling systems and equipment. Extreme heat damages paved roads. Rural areas are difficult to access during the rainy season, and frequent intense flooding, due to the very bad road conditions, affects access to basic social services and to markets. This impacts the quality of life and food security in rural areas.
2. **The project is designed to contribute to climate resilience of the transport sector and of the communities it serves.** Table A.2.1 sets out the climate change vulnerability context of the transport sector, lists the project’s statement of intent for enhancing resilience to climate change impacts, and outlines how this is linked to the project activities. The table gives identifies the key activities that have direct and/or indirect climate co-benefits and links them to the project components.

Table A.2.1. How This Project Will Address Climate Change Vulnerability Through Project Activities

Climate change vulnerability context	<p>There are several risks posed by climate change in Cameroon. An in-depth climate and disaster risk screening was carried out to map major climate change risks in the project location. Climate change is expected to: (i) increase mean annual temperatures and rainfall; (ii) make rainfall more erratic; and (iii) increase the occurrence of storms, floods, and droughts in the project area. Destructive storms, heat, and droughts will have devastating effects on transport infrastructure, and recurrent floods will be responsible for the largest share of economic and human losses in the project area. The increase in flooding will also have serious implications for agriculture, food security, public health, infrastructure, and the maintenance of trade routes.</p> <p>Annual average temperatures have been increasing since the 1960s, with the North of Cameroon experiencing the most rapid temperature rise. Temperatures are projected to continue rising, with the rate of warming higher in the country’s interior than on the coast. Average annual precipitation has decreased by 2.9 mm per decade on average since the 1960s. Various climate model projections show a wide range of changes over Cameroon, with some projecting increases in average annual rainfall, and others a decrease.⁶⁹ Cameroon’s NDC indicates an intensification of droughts, and an increase in frequency and intensity of flooding events.⁷⁰</p> <p>The MDK road corridor to be rehabilitated, and the network of communal and earth roads are in the Sudano–Sahelian region in the Far North of Cameroon. During rainy seasons traffic flow is interrupted for extended periods of time; it causes damage to existing culverts and bridges, and erodes surfaces due to over-embankment flow. The major risk hazards identified by the climate and disaster risk screening through the World Bank study "Vulnerability Assessment and Adaptation Strategy of the Cameroon Road Network, " as well as the analytical work carried out by the World Bank’s project team were extreme temperatures, heavy rainfall events, flooding, landslides, and erosion.⁷¹ Rainfall projections indicate that the road’s exposure to heavy downpours and sustained periods of rainfall is likely to increase over time.</p>
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⁶⁸ Think Hazard, consulted on February 17, 2021. URL: <https://thinkhazard.org/en/report/45-cameroon>.

⁶⁹ WBG Climate Knowledge Portal, consulted on February 17, 2021. URL: <https://climateknowledgeportal.worldbank.org/country/cameroon/climate-data-historical>.

⁷⁰ Cameroon’s Nationally Determined Contribution to the United Nations Framework Convention on Climate Change; Revised in 2021. URL; [https://unfccc.int/sites/default/files/NDC/2022-06/CDN percent20r percentC3 percentA9vis percentC3 percentA9e percent20CMR percent20finale percent20sept percent202021.pdf](https://unfccc.int/sites/default/files/NDC/2022-06/CDN%20r%20percentC3%20percentA9vis%20percentC3%20percentA9e%20percent20CMR%20finale%20sept%202021.pdf)

⁷¹ Climate Vulnerability Assessment and Adaptation Strategy for the Cameroon Road Network; 20 July 2021; World Bank.



	<p>Figure 5 (in Section IV) shows the sections of the MDK corridor that are most exposed to flooding, and where adaptation and resilience measures should be particularly applied for 50- and 100-year return periods. This figure is based on the analytical work carried out by the World Bank’s project team—spatial analysis of the MDK corridor area: exposure to flood hazards. For a 50-year return period, sections along the corridor most exposed to flooding are located on several stretches between Waza and Tilde, and between Maltam and Kousseri. It was estimated that for a 50-year return period, 46 km of the MDK corridor (22 percent) would be exposed to flood depths more than 20 centimeters. Furthermore, technical and topographic studies conducted by the MINTP Joint Financing Project Implementation Unit suggest that the road profile should be raised for 144 km of the corridor (70 percent) to mitigate the risk of water damage on the various layers of pavement.</p>
<p>Statement of purpose or intent</p>	<p>The project aims to enhance the climate resilience of the communities located in the area of influence of the MDK road corridor and the refugee hosting districts in the Far North of Cameroon. It also aims to enhance the resilience of the transport sector more broadly through integrating climate change resilience considerations in capacity building activities carried out for the MINTP. The project will include a broad range of activities that will integrate climate change resilience and adaptation measures in transport infrastructure, construction design and maintenance, institutional capacity building, and policy and planning, including contingency planning.</p> <p>The Project Development Objectives are to (i) enhance connectivity and climate resilience along the MDK road section; and (ii) to improve access to basic socioeconomic infrastructure in selected districts of the Far North of Cameroon.</p> <p>Component 1, which accounts for more than 93 percent of the total credit and grant funds, entails rehabilitating the MDK road, the Kousseri bypass, and about 200 km of regional and communal roads, as well as reconstructing the Tilde Bridge. The current state of these infrastructures illustrates their current vulnerability to extreme weather conditions and climate change conditions, especially to increased precipitation and the resultant runoff, as well as to heat waves. The project aims to ensure that the MDK road corridor is resilient to the impacts of disasters and climate change-induced extreme events; and that rehabilitation, reconstruction, and maintenance are carried out by applying resilient technologies that incorporate the principles of natural resource efficiency and nature-based solutions. The climate-resilient designs will include appropriate drainage structures, highway embankments, slope protection works, and bioengineering solutions.</p> <p>Component 3: Institutional Strengthening, will entail the enhancement of institutional skills in handling natural hazards and environmental risks in the project corridor areas, and will lead to better contingency planning to help improve climate resilience. Road safety awareness campaigns in the project area, and a road safety data collection and management system will help improve climate resilience and adaptation through information gathering that will inform decision making and gear key strategies.</p>
<p>Link to project activities</p>	<p>This project will enhance resilience of the road network and of the communities served by the MDK road corridor. This will be done through four project components, as follows:</p> <p>Component 1: Road Rehabilitation and Maintenance Works. This project component will support civil works for rehabilitating the approximately 205 km-long MDK road corridor to bituminous paved road standards. The current dilapidated condition of the road, which has lost its paved surface layer, is vulnerable to extreme weather conditions and climate change risks, especially with the projected increase in precipitation levels that will lead to more frequent and intense flooding and erosion. Rehabilitating the road and constructing a new paved road surface is therefore a good climate change adaptation measure. During the rainy season, a paved road will have better resistance to flooding, will drain the water from the surface more easily, and will reduce the risk of potholes and water stagnation on the surface of the road. A paved surface will also reduce the risk of water penetrating and submerging the construction layers, thereby reducing the road’s bearing capacity. To enable the rehabilitation works in the project corridor to meet the current and future challenges of climate change, the program will adopt the concept of ‘build back better,” with a focus on:</p> <ol style="list-style-type: none"> Raising the Road Level: The road surface will be raised to an elevation higher than the expected flood level, to reduce the risk of road damage, and to prevent the road becoming inaccessible during a flood event. Adjusting Side Slope (Landscape Management): In terms of climate change adaptation, side slopes should be adjusted from 1:1.5 to 1:2, or even flatter, to prevent flood damage and erosion from road surface runoff due to increased precipitation. Enhancing Drainage: Runoff will not be allowed to develop sufficient volume or velocity to cause excessive wear along ditches, at culverts, or along exposed running surfaces, cuts, or fills. The elevation of the bottom of the ditch



	<p>shall be at least 0.2-0.3 meters below the subgrade elevation, in order for the ditch to drain the pavement structure of the road and collect water from surrounding areas. The ditch shall have a longitudinal slope toward an exit point, where the water can be safely discharged. Ditches with slopes steeper than 5 percent, depending on soil conditions, shall have erosion protection measures.</p> <ol style="list-style-type: none">4. Improving Road Permeability: The detailed design will consider, where needed in swampy areas, a layer consisting of clean rock wrapped in geotextile fabric, which will be placed as the first embankment layer on the ground. The water shall then pass through this layer from one side of the road to the other. The rock layer will be a support foundation for the road during wet or muddy conditions exacerbated by climate change and increasing precipitations.5. Using Underdrains: Underdrains will be used in built-up areas, or in other areas that have only limited space for open ditches. The purpose of underdrains is to remove water from the structure of the road, and to hinder ground water from surrounding areas to reach the road structure.6. Introducing Debris Deflectors: Drainage blockage by debris might be a problem in some areas during the rainy period. Floating or submerged debris like tree logs, twigs, or leaves can obstruct the waterway entrances of culverts or bridges, and can block culverts or cause damage to drainage structures. Debris deflectors shall be used to prevent culverts or bridges from getting clogged.7. Preventing Erosion: Erosion is expected to be a major problem, with possible increased rainfall; therefore, to prevent increased erosion will be an important adaptation option in response to climate change. Some of the methods that can be used to try to protect the road and its drainage system include retaining walls, gabions, and riprap.8. Using Roads for Water Management: Improved understanding of hydrology around the project area and use of road infrastructure can enhance the resilience of local communities against the impacts of climate change; primarily water scarcity and droughts. Balancing ponds may have a very limited effect in protecting the road, but can be of use for villages to store water, and can be used for irrigation during the dry season. This will be one of the measures used to protect vulnerable livelihoods from adverse effects of climate change such as prolonged droughts.9. Road Design Standards and Specifications: The project will use road design standards and specifications that integrate climate change considerations. Special attention will be paid in areas that are at high risk of flooding that may cause erosion and road damage. The most important factors to adapt are the road levels; the cross drainage of the road; and erosion protection for the road. The road elevations shall be at least 0.5 meter above the flood levels.10. Green Planning: Green planning is one climate change adaptation subcomponent for this project. In addition to increasing the green area along the road, the project will benefit the local population through employment of local laborers, and later with crops from the planted trees, mainly mango trees. This will be another of the measures to protect vulnerable livelihoods from adverse effects of climate change such as prolonged droughts.11. Monitoring Conditions as early warning systems: This will entail measures to manage disaster risks that are exacerbated by climate change, for example flooding brought about by increased precipitation. The road, bridges, drainage, and surrounding areas will be regularly monitored in order to improve oversight of the conditions and to propose improvements.12. Improving Pavement Design: The increase in extreme temperatures and number of hot days as a result of climate change has impacts on transport infrastructure, including the damage to the pavement surface, pavement cracking, accelerated aging of the binder, rutting of asphalt, and the bleeding or flushing of seals. Counter measures that will enhance resilience will entail the use of proper asphalt mix specifications; the use of advanced heat-resistant materials; and revised pavement thicknesses that take into consideration predicted future temperatures.13. Improving Design of the Tilde Bridge: The rise in temperatures due to climate change will cause thermal expansion of the materials used in bridge construction. To counter the resulting deterioration of the bridge infrastructure, bridge design will account for the temperature increment at the design stage by including the use of expansion joints. <p>Component 2: Improved community infrastructure in selected areas and IDP host communities of the Far North region. This project component will strengthen the climate resilience of community infrastructure, like schools and health centers, through the adoption of design and construction standards that consider passive cooling, the planning of trees to cause shade and cooling to users and provide soil stabilization, enhanced drainage facilities. This component will also finance the construction of water points and other basic infrastructure for providing shade and sheltering for pastoralists in drought and extreme heat prone areas.</p>
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	<p>Component 3: Transport Sector Institutional Strengthening. This project component will strengthen the skills of the MINTP and local authorities in handling climate change and natural disasters in the refugee hosting areas, and the climate resilience of local communities. It will also strengthen the capacity of the MINT and other public road safety stakeholders in road safety management. Key contributions will include: building capacity for the inclusion of climate resilience in the planning and management of road infrastructure; supporting the main public engineering universities on climate adaptation, civil engineering, transportation planning, and digital technology; developing and operationalizing a road accident database management system; undertaking training and awareness campaigns on road safety in the project area; and setting up an internship program for students to work within the project, with a focus on females.</p>
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- 3. The project is estimated to reduce GHG emissions and in this way contribute to the country's climate mitigation objectives.** Reduced travel time and reduced congestion are expected to lower carbon emissions. Road improvement works will help to increase vehicle speed and enhance fuel efficiency, which will in turn reduce carbon emissions. The road planning tool HDM-4 was used to carry out the project economic analysis. Overall, based on current and future traffic forecasts, the GHG emission assessment shows that upgrading of the MDK road corridor is expected to reduce GHG emissions by 106,485 tons of CO₂e during 20 years of operation. Furthermore, tree planting activities are expected to further contribute to mitigation objectives through carbon capture and sequestration.