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Report No: PAD1680

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

PROJECT APPRAISAL DOCUMENT

ON A

PROPOSED LOAN

IN THE AMOUNT OF EURO 172.4 MILLION
(US\$192 MILLION EQUIVALENT)

TO THE

REPUBLIC OF CAMEROON

FOR A

TRANSPORT SECTOR DEVELOPMENT PROJECT

October 5, 2016

Transport and ICT Global Practice
Africa Region

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CURRENCY EQUIVALENTS

(Exchange Rate Effective July 31, 2016)

Currency Unit = EUR
EUR 0.8979 = US\$1

FISCAL YEAR

January 1 – December 31

ABBREVIATIONS AND ACRONYMS

ADC	<i>Aéroports du Cameroun</i> / Cameroon Airport Management Agency
AfDB	African Development Bank
AGA	Aerodrome and Ground Assistance
ARFF	Air Rescue and Fire Fighting
BDEAC	<i>Banque de Développement des Etats de l'Afrique Centrale</i> / Development Bank of Central African States
CAA	<i>Caisse Autonome d'Amortissement</i> / Autonomous Sinking Fund
CAMAIR-CO	Cameroon Airlines Corporation
CAMRAIL	Cameroon Railway
CAPs	Corrective Action Plans
CAS	Country Assistance Strategy
CCAA	Cameroon Civil Aviation Authority
Cellule BAD-BM	WB-AfDB Project Implementation Unit, MINTP
CEMAC	<i>Communauté Economique et Monétaire des Etats de l'Afrique Centrale</i> / Central African Economic and Monetary Community
CEMAC TTFP	CEMAC Transport and Transit Facilitation Program
CMC	Crisis Management Center
CMTF	Cameroon Multimodal Transport Project
CBA	Cost Benefit Analysis
CPF	Country Partnership Framework
CSPM	<i>Commission Spéciale de Passation des Marchés</i> / Special Contracting Commission
DSCE	<i>Document de Stratégie pour la Croissance et l'Emploi</i> / Growth and Employment Strategy Paper
DUP	<i>Déclaration d'Utilité Publique</i> / Public Utility Declaration
ECCAS	Economic Community of Central African States
EI	Effective Implementation
ESIA	Environmental and Social Impact Assessment
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plan
FM	Financial Management
GDP	Gross Domestic Product

GNI	Gross National Income
GoC	Government of Cameroon
GRS	Grievance Redress Service
HDM	Highway Design and Maintenance Standards Model
ICAO	International Civil Aviation Organization
IDA	International Development Association
IFIs	International Financial Institutions
INDS	Intended Nationally Determined Contribution
IRI	International Roughness Index
IRR	Internal Rate of Return
IsDB	Islamic Development Bank
ISDS	Integrated Safeguards Data Sheet
ISP	Implementation Support Plan
IITS	Integrated Intermodal Transport Strategy
M&E	Monitoring and Evaluation
MDRI	Multilateral Debt Relief Initiative
MINEPAT	<i>Ministère de l'Économie, de la Planification et de l'Aménagement du Territoire</i> / Ministry of Economy Planning and Regional Development
MINMAP	<i>Ministère des Marchés Publics</i> / Ministry of Public Contracts
MINT	<i>Ministère des Transports</i> / Ministry of Transport
MINTP	<i>Ministère des Travaux Publics</i> / Ministry of Public Works
MTB	Multimodal Transport Benchmark
MTMP	Multimodal Transport Master Plan
NCAP	National Civil Aviation Plan
NPV	Net Present Value
NSP	National Safety Plan for Airports
OPBC	Output Performance-Based Contract
PDO	Project Development Objective
PIU	Project Implementation Unit
PoD	Port of Douala
PPP	Public Private Partnership
RAP	Resettlement Action Plan
RF	Road Fund
RPF	Resettlement Policy Framework
SARPs	Standard and Recommended Practices
SBD	Standard Bidding Document
SCD	Systematic Country Diagnostic
SMS	Safety and Management System
TEU	Twenty Foot Equivalent Unit
TPIP	Transport Priority Investment Program
TPM	Transport Planning Model
UGP CCAA	<i>Unité de Gestion du Projet</i> / Project Implementation Unit CCAA
VOC	Vehicle Operating Cost

Regional Vice President:	Makhtar Diop
Country Director:	Elisabeth Huybens
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REPUBLIC OF CAMEROON
Transport Sector Development Project
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PAD DATA SHEET*Cameroon**Cameroon Transport Sector Development Project (P150999)***PROJECT APPRAISAL DOCUMENT***AFRICA**Transport and ICT Global Practice*

Report No.: PAD1680

Basic Information			
Project ID P150999	EA Category B - Partial Assessment	Team Leader(s) Peter Ngwa Taniform, Marc Marie Francois Navelet Noualhier	
Lending Instrument Investment Project Financing	Fragile and/or Capacity Constraints []		
	Financial Intermediaries []		
	Series of Projects []		
Project Implementation Start Date 27-Oct-2016	Project Implementation End Date 31-Dec-2021		
Expected Effectiveness Date 27-Jan-2017	Expected Closing Date 30-Jun-2022		
Joint IFC No			
Practice Manager/Manager Nicolas Peltier-Thiberge	Senior Global Practice Director Pierre Guislain	Country Director Elisabeth Huybens	Regional Vice President Makhtar Diop
Borrower: Government Republic of Cameroon			
Responsible Agency: Cellule BAD-BM, Ministry of Public Works			
Contact: Telephone No.:	Zanga Mathurin 237-222-222-294	Title: Email:	Coordinator csepr_badbm@yahoo.fr
Responsible Agency: Unité de Gestion du Projet, Cameroon Civil Aviation Authority			
Contact: Telephone No.:	Paulin Ndongo 237-222-303-090	Title: Email:	Coordinator paulin.ndongo@ccaa.aero
Project Financing Data(in USD Million)			
[X]	Loan	[]	IDA Grant
[]		[]	Guarantee

[]	Credit	[]	Grant	[]	Other					
Total Project Cost:		206.70			Total Bank Financing:		192.00			
Financing Gap:		0.00								
Financing Source										Amount
Borrower										14.70
International Bank for Reconstruction and Development										192.00
Total										206.70
Expected Disbursements (in USD Million)										
Fiscal Year	2017	2018	2019	2020	2021	2022				
Annual	10.00	35.00	55.00	45.00	32.00	15.00				
Cumulative	10.00	45.00	100.00	145.00	177.00	192.00				
Institutional Data										
Practice Area (Lead)										
Transport & ICT										
Contributing Practice Areas										
Climate Change, Gender, Public Private Partnership, Trade & Competitiveness										
Proposed Development Objective(s)										
The PDO is to: (a) strengthen transport planning; (b) improve transport efficiency and safety on the Babadjou-Bamenda section of the Yaounde - Bamenda transport corridor; and (c) enhance safety and security at selected airports.										
Components										
Component Name										Cost (USD Millions)
Transport Planning and Capacity Building										8.30
Road Transport Efficiency Improvement										141.40
Air Transport Safety and Security Improvement										48.70
Support to Project Implementation Management and Monitoring										8.30

Systematic Operations Risk- Rating Tool (SORT)		
Risk Category	Rating	
1. Political and Governance	High	
2. Macroeconomic	Moderate	
3. Sector Strategies and Policies	Moderate	
4. Technical Design of Project or Program	Moderate	
5. Institutional Capacity for Implementation and Sustainability	High	
6. Fiduciary	High	
7. Environment and Social	High	
8. Stakeholders	Moderate	
9. Other		
OVERALL	High	
Compliance		
Policy		
Does the project depart from the CAS in content or in other significant respects?	Yes []	No [X]
Does the project require any waivers of Bank policies?	Yes []	No [X]
Have these been approved by Bank management?	Yes []	No []
Is approval for any policy waiver sought from the Board?	Yes []	No [X]
Does the project meet the Regional criteria for readiness for implementation?	Yes [X]	No []
Safeguard Policies Triggered by the Project	Yes	No
Environmental Assessment OP/BP 4.01	X	
Natural Habitats OP/BP 4.04		X
Forests OP/BP 4.36		X
Pest Management OP 4.09		X
Physical Cultural Resources OP/BP 4.11	X	
Indigenous Peoples OP/BP 4.10		X
Involuntary Resettlement OP/BP 4.12	X	
Safety of Dams OP/BP 4.37		X
Projects on International Waterways OP/BP 7.50		X
Projects in Disputed Areas OP/BP 7.60		X

Legal Covenants			
Name	Recurrent	Due Date	Frequency
Counterpart Funding - Designated Accounts, Schedule 2, Section V, A (1)	X		Continuous
Description of Covenant			
Maintain, throughout the implementation of the Project, in a financial institution and on terms and conditions acceptable to the World Bank, an account into which it shall deposit all counterpart funds required for Parts 2(b)(ii), 3(a)(v) and 4(b) of the Project ("Counterpart Funds Account").			
Name	Recurrent	Due Date	Frequency
Counterpart Funding - Schedule and Installments, Schedule 2, Section V, A (2)		27-March-2020	
Description of Covenant			
Without limitation upon the provisions of Section 5.03 of the General Conditions, on a schedule and in installments agreed with the World Bank, but not later than thirty-six (36) months after the Effective Date, deposit into the Counterpart Funds Account, an amount in the Borrower's currency, equivalent to fourteen million seven hundred thousand Dollars (US\$14,700,000) ("Counterpart Funds").			
Name	Recurrent	Due Date	Frequency
Counterpart Funding - Eligible Expenditures, Schedule 2, Section V, A (3)	X		Quarterly
Description of Covenant			
Ensure that all amounts deposited in the Counterpart Funds Account be used exclusively to pay for Eligible Expenditures required for the relevant parts of the Project.			
Name	Recurrent	Due Date	Frequency
Tax waiver applicable to eligible expenditures, Schedule 2, Section V, B	X		Continuous
Description of Covenant			
Without limitations upon the provisions of Section 5.03 of the General Conditions, the Recipient shall waive any and all Taxes, applicable to all Eligible Expenditures under the Project.			
Name	Recurrent	Due Date	Frequency
Output performance-based contract, Schedule 2, Section V, C		27-Jan-2020	
Description of Covenant			
For purposes of Section 5.06 (b) of the General Conditions, the Recipient shall, not later than thirty-six (36) months after the Effective Date, enter into a ten (10)-year output performance-based contract with a qualified contractor for the maintenance of the Yaoundé-Bamenda corridor.			
Name	Recurrent	Due Date	Frequency
Financial Management, Schedule 2, Section II, B, 4		27-Mar-2017	
Description of Covenant			

In furtherance of the provisions of this Section II.B of Schedule 2 to this Agreement and not later than two (2) months after the Effective Date, the Borrower shall, and shall cause the CCAA to, adapt or establish as the case may be, for the purposes of the project, its computerized multi-project financial and accounting system in a manner satisfactory to the World Bank, and successfully train relevant staff in the use thereof.

Name	Recurrent	Due Date	Frequency
Project Implementation Unit - Recruitment of qualified/experienced personnel, Schedule 2, Section I, A, 2 (b)		27-Mar-2017	

Description of Covenant

Without limitation upon the provisions of Paragraph (a) of Section I.A.2 of this Schedule 2, the Project Implementation Unit shall at all times be comprised of qualified and experienced personnel in adequate numbers, and to this end, inter alia, no later than two (2) months after the Effective Date, recruit a junior procurement specialist and an environmental specialist and a social specialist, all with qualifications and terms of reference acceptable to the World Bank.

Name	Recurrent	Due Date	Frequency
Project Implementation Manual, Schedule 2, Section I, D, 1		27-Mar-2017	

Description of Covenant

No later than two (2) months after the Effective Date, the Borrower shall update the Project Implementation Manual in a manner satisfactory to the World Bank and shall carry out the Project in accordance with said Project Implementation Manual and except as the World Bank shall otherwise agree, the Recipient shall not assign, amend, abrogate, or waive the Project Implementation Manual, or any provision thereof.

Name	Recurrent	Due Date	Frequency
Annual Work Plans and Budgets, Schedule 2, Section I, E, 1	X		Yearly

Description of Covenant

Not later than November 30 in each calendar year (or one month after the Effective Date for the first year of Project implementation), the Borrower shall prepare or cause to be prepared for the purpose of forwarding to the Bank, a draft annual work plan and budget for the Project (including Training and Operating Costs) for the subsequent calendar year of Project implementation, of such scope and detail as the Bank shall have reasonably requested.

Conditions

Source Of Fund	Name	Type
IBRD	Expansion of the mandate of the Project Steering Committee, Article V, 5.01 (a)	Effectiveness

Description of Condition

The Borrower has expanded the mandate of the Project Steering Committee in accordance with the provisions of Section I.A.1 of Schedule 2 to the Loan Agreement.

Source Of Fund	Name	Type
IBRD	Expansion of the mandate of the Special Tender Board, Article 5, 5.01 (b)	Effectiveness

Description of Condition				
The Borrower has expanded the mandate of the Special Tender Board in accordance with Section I.A.3 of Schedule 2 to the Loan Agreement.				
Source Of Fund	Name			Type
IBRD	Subsidiary Agreement, Article 5, 5.01 (c)			Effectiveness
Description of Condition				
The Subsidiary Agreement has been executed on behalf of the Borrower and CCAA in accordance with Section I.B of Schedule 2 to the Loan Agreement and established the CCAA Tender Board in accordance with Section I.B.1(c) of Schedule 2 to the Loan Agreement.				
Source Of Fund	Name			Type
IBRD	CCAA Fiduciary Team, Article 5, 5.01 (d)			Effectiveness
Description of Condition				
CCAA has recruited a procurement specialist in accordance with the provisions of Section I.B.1(b)(i)(A) of Schedule 2 to the Loan Agreement.				
Source Of Fund	Name			Type
IBRD	Safeguards compliance, Article 5, 5.01 (e)			Effectiveness
Description of Condition				
The Borrower has disclosed the ESMP and ESIA in accordance with the provisions of Section I.F.6 of Schedule 2 to the Loan Agreement.				
Source Of Fund	Name			Type
IBRD	Ratification of the Subsidiary Agreement, Article 5, 5.02			Effectiveness
The Additional Legal Matter consists of the following, namely, that the Subsidiary Agreement has been duly authorized or ratified by the Borrower and CCAA and is legally binding upon the Borrower and CCAA in accordance with its terms.				
Source Of Fund	Name			Type
IBRD	Retroactive Financing, Schedule 2, Section IV, B, 1			Disbursement
No withdrawal shall be made for payments made prior to the date of the Loan Agreement, except that withdrawals up to an aggregate amount not to exceed twenty percent (20%) of the Loan may be made for payments made prior to this date but on or after January 31, 2016, for Eligible Expenditures under Category (1)				
Team Composition				
Bank Staff				
Name	Role	Title	Specialization	Unit
Peter Ngwa Taniform	Team Leader (ADM Responsible)	Sr Transport. Spec.		GTI08
Marc Marie Francois Navelet Noualhier	Team Leader	Sr Transport. Spec.		GTI08

Kouami Hounsinou Messan	Procurement Specialist (ADM Responsible)	Senior Procurement Specialist		GGO07
Celestin Adjalou Niamien	Financial Management Specialist	Sr Financial Management Specialist		GGO26
Emeran Serge M. Menang Evouna	Safeguards Specialist	Senior Environmental Specialist		GEN07
Fabio Galli	Program Manager	Lead Transport Specialist		GTI08
Jean-Francois Marteau	Peer Reviewer	Program Leader		ECCU5
Khalid Boukantar	Team Member	Program Assistant		GTI05
Kristyna Bishop	Safeguards Specialist	Senior Social Development Specialist		GSU01
Leonard Ewang Ngumbah Wolloh	Team Member	Temporary		AFCC1
Luis M. Schwarz	Team Member	Senior Finance Officer		WFALA
Maiada Mahmoud Abdel Fattah Kassem	Team Member	Finance Officer		WFALA
Maman-Sani Issa	Safeguards Advisor	Regional Safeguards Adviser		OPSPF
Monica Augustina Cristina Moldovan	Team Member	Transport Specialist		GTI08
Nicolas Peltier-Thiberge	Program Manager	Practice Manager		GTI08
Nneoma Veronica Nwogu	Counsel	Senior Counsel		LEGAM
Pierre A. Pozzo di Borgo	Peer Reviewer	Chief Industry Specialist		CNGSI
Romain Pison	Peer Reviewer	Transport Specialist		GTI02
Vickram Cuttaree	Peer Reviewer	Program Leader		EACPF
Extended Team				
Name	Title	Office Phone	Location	
Jean Kanyamuhanda	Consultant on Trade Facilitation			

Locations					
Country	First Administrative Division	Location	Planned	Actual	Comments
Cameroon	Centre	Nsimalen	X		Airport
Cameroon	Far North	Maroua	X		Airport
Cameroon	North Province	Garoua	X		Airport
Cameroon	Littoral	Douala	X		Airport
Cameroon	North-West Province	Bamenda	X		Road
Cameroon	West	Babadjou	X		Road

I. STRATEGIC CONTEXT

A. Country Context

1. Cameroon is a medium-size (475,000 km²) country with a population of 22.3 million inhabitants, which is increasing by 2.5 percent per year. The country is located in Central Africa and is a member of both the Economic Community of Central African States (ECCAS) and the Central African Economic and Monetary Community (*Communauté Economique et Monétaire des Etats de l'Afrique Centrale* - CEMAC), sharing borders with Nigeria, Chad, the Central African Republic, the Republic of Congo, Gabon, and Equatorial Guinea. Cameroon is a low middle-income country with high levels of poverty¹, weak social indicators and a Human Development Index ranking of 153 out of 188 in 2014. Gross domestic product (GDP) per capita was estimated at US\$1,429 in 2014, while the Gross national income (GNI) per capita was US\$1,290 (Atlas method) for the same year. The country's economic performance has been relatively robust over the last decade, with an average annual GDP growth rate of about 5 percent during the period.

2. Given Cameroon's favorable geographic location at the crossroads of major regional and continental routes serving several land locked countries including parts of Nigeria, it remains one of the key regional transport hubs for Central Africa. Through the Port of Douala (PoD), Cameroon provides the only viable sea access to Chad and the Central African Republic via the Douala - N'Djamena/Bangui road corridors. However, despite the fact that Cameroon shares a long common border with the Central African Republic, Chad and Nigeria, trade flows remain limited. For example trade flows between Cameroon and Nigeria, which is one of the largest economies in Africa, account for just 1.4 percent of Cameroon's exports and 11 percent of its imports. This is mainly due to poor transport infrastructure in the border area and persistent non-tariff barriers.

B. Sectoral and Institutional Context

Sector Context

3. The overall poor state of transport infrastructure, combined with high transport/logistics costs, has reduced the economic benefits that Cameroon should derive from being one of the key transport hubs for Central Africa. While progress has recently been observed as a result of both the on-going road improvement works and trade facilitation activities financed by IDA and other development partners on key intra/inter regional corridors, more efforts are needed to substantially reduce transport costs. Transport costs on intra/inter-regional corridors in Cameroon, are among the highest in Sub-Saharan Africa²: US\$0.112 to US\$0.141 per ton-km as against US\$0.062 to US\$0.080 per ton-km in West Africa (Lome-Ouagadougou-Cotonou-Niamey corridor); US\$0.062 to US\$0.079 per ton-km on the Northern Corridor in East Africa; and US\$0.048 to 0.056/ton-km in Southern Africa (Durban-Lusaka and Durban-Ndola corridors).

¹ In 2014, 38 percent of the population lived below the national poverty line. The incidence of poverty is much lower in urban than in rural areas (10 versus 57 percent) and 90 percent of all poor people live in rural areas. Even though Cameroon is rapidly urbanizing, without changes in the levels of rural poverty, poverty is expected to remain mostly a rural phenomenon - *Systematic Country Diagnosis (SCD) for Cameroon- December, 2015*

² Transport Prices and Costs in Africa: A Review of the Main International Corridors. Teravaninthorn, S. and Raballand, G. – World Bank (2009).

4. Cameroon's transport sector faces a multitude of challenges such as: (a) maintaining and expanding the road network; (b) developing intermodal/multimodal interfaces to improve logistics performance; (c) completing the rehabilitation of the existing rail network and expanding it to better serve growth poles such as major ports, agricultural production areas, and mining areas; (d) reducing transport costs and prices through more effective service delivery and competition in the transport sector to enhance Cameroon's role as a regional transport hub; (e) improving the planning, prioritization, operation and maintenance of transport infrastructure; (f) ensuring Cameroon's compliance with international standards in civil aviation safety and security; and (g) improving the professionalization and efficiency of the transport services industry.

5. What follows is a short description of specific issues that affect the transport sub-sectors:

6. **Road sub-sector.** At present, the road infrastructure network cannot adequately meet the traffic demand, which is growing by about 7 percent per year. Out of a total national classified/unclassified road network of about 100,000 km, only 5,634 km is paved and about half of the paved network is in poor condition, due to inadequate road maintenance funding and weak road asset management practices. Approximately 85 percent of the unpaved network is also in poor condition, limiting access to many rural areas in a country where agriculture is a major source of income and accounts for about 70 percent of employment. Road density in Cameroon is estimated at 9 km per 1000 km² and 0.280 km per 1000 inhabitants, significantly below that of countries with similar levels of economic development and area such as Côte d'Ivoire (16/0.384) and Ghana (25/0.354).

7. To improve road asset management, a second generation road fund (RF) was created in 1998. However, this was abolished by a Ministerial Act of 2007, which reverted to the pre-1998 situation when road maintenance resources were determined in an arbitrary fashion. Under the current arrangement, resources collected for the RF first go to the State Treasury, which then provides an annual budget allocation for road maintenance. As a result of the budget control measures imposed by the Ministry of Finance, only about 43 percent of the maintenance needs for the 27,000 km classified road network are currently being met. Fuel levies for road maintenance and rehabilitation have increased substantially over the last decade to about FCFA100 billion (about US\$213 million) per year but only about 50 percent of this amount is used for road maintenance. Chronic road maintenance underfunding, together with weak implementation capacity, are negatively affecting the quality and sustainability of the road network.

8. **Port sub-sector.** Traffic at the PoD has reached about 9 million tons and 350,000 twenty-foot equivalent unit (TEU) per year³. Since 2007, freight transit time once goods leave the PoD to N'Djamena and Bangui has been reduced from about 8.6 to about 5 days, and from about 6.4 to about 4 days, respectively. While these figures are well below the targets of 12 and 8 days, respectively in the World Bank's 2010-13 Country Assistance Strategy (CAS), the current total dwell time⁴ of 17 days inside the PoD remains high by international standards reflecting its low

³PoD is by far the busiest port of the country.

⁴ The total dwell time is composed of the operational dwell time (time needed for physical operations), the transactional dwell time (time for customs/ Single Window for External Trade clearance) and the storage dwell time (time spent by importers to mobilize customs taxes and port fees, time during which transporters/importers use port facilities for storage purposes, etc.).

productivity. In 2014, the new deep sea port at Kribi was opened, but it is still not fully operational due to inadequate transport infrastructure to connect it to the rest of Cameroon and the sub-region.

9. **Railway sub-sector.** The provision of railway services was concessioned out in 1999, and CAMRAIL operates the about 1,000 km meter gauge railway line from Douala to Ngaoundere, as well as another 245 km of secondary lines. In 2014, CAMRAIL carried about 1.7 million tons of freight and about 1.6 million passengers, playing a critical role in serving northern Cameroon, Chad, and the Central African Republic. CAMRAIL transports about 30 percent of the goods transported between Douala and Ngaoundere. The CAMRAIL concession is performing well and the initially obsolete rolling stock and deteriorated rail track infrastructure are gradually being modernized and replaced. CAMRAIL and the Government of Cameroon (GoC) have agreed to invest about US\$479 million between 2009 and 2020 to improve the competitiveness and sustainability of rail transport.

10. **Airport sub-sector.** In 2014, the Cameroon Airport Management Agency (*Aéroports du Cameroun*) handled 1,223,191 passengers and 16,543 tons of freight, an 8 percent increase over the previous year. Cameroon has an active commercial aviation sector with: (a) around 25 regional and international carriers offering commercial air transport services, mostly through Douala and Yaoundé International airports; (b) a national carrier serving all main domestic airports of Cameroon; and (c) a few private carriers engaged in charter type operations⁵. The GoC has recently adopted a major restructuring plan to reinforce the capacity of CAMAIR-CO.

11. Despite the progress made in the sector, a host of issues still affect the aviation sector in Cameroon. Among the most critical ones are: (a) insufficient airport safety and security; (b) inadequate airport infrastructure and low service standards; (c) limited capacity of the Cameroon Civil Aviation Authority (CCAA) to fulfill its mandate in the implementation of some safety and security measures and as a regulatory agency; and (d) poor productivity and lack of competitiveness of the loss making national flag carrier (CAMAIR-CO).

12. Security and safety at the two key international airports of Douala and Yaoundé was improved thanks to the IDA-financed regional West and Central Africa Air Transport Safety and Security Project (P083751). As a follow up and to ensure sustainability, the CCAA has made significant efforts over the years to reduce the non-compliance gap with standard and recommended practices (SARPs) of the International Civil Aviation Organization (ICAO). More specifically, the 2015 ICAO audit results reveal that the percentage of safety conformity had moved from less than 40 percent in 2006 to 60 percent in 2015. However, both airports, as well as the international airports in Garoua and Maroua still require significant investments before they can fully meet the safety standards prescribed by the ICAO. An evaluation mission conducted in 2015 under the ICAO's coordination showed that Cameroon's civil aviation still has work to do to fully meet the safety and security standards required by the Chicago Convention. These findings are consistent with an audit of "Threats and Vulnerabilities" at Cameroon's three major airports of Douala, Yaoundé and Garoua, conducted in 2010 under the sponsorship of the US Government Department of Trade. This audit revealed that even though progress has been made, there is a need for more funding to improve on the level of security conformity with the ICAO standards.

⁵ The national carrier, Cameroon Airlines Corporation (CAMAIR-CO), operates a fleet of one B767, two B737-700, and two recently acquired Xian MA-60 to serve several domestic/regional/intercontinental routes.

13. The GoC is fully cognizant of the developmental challenges that the transport sector faces and plans to address them through its Growth and Employment Strategy Paper (*Document de Stratégie pour la Croissance et l'Emploi-DSCE*) and 'Vision 2035'. More specifically, the transport sector vision of the GoC focuses on major reforms of the transport sector that are able to generate: (a) significant investments for the transport sector over the next decade; (b) substantial reduction in the maintenance backlog on existing transport infrastructure over the same period; (c) improved institutional capacity and governance standards to improve efficiency in road asset management; (d) adequate transport planning capacity based on an inclusive policy dialogue among key stakeholders involved in the transport sector; and (e) greater professionalization and efficiency in the provision of transport sector services.

14. Consequently, the implementation of the GoC's transport sector vision should lead to improved selectivity of future transport sector investments that are expected to generate significant socio-economic impacts to help meet the sector's growth and employment objectives as laid out in the DSCE. Priority will be placed on improved governance and efficiency of the sector backed by appropriate planning, effective management and a strong regulatory framework. To leverage much needed additional sectoral funding through public private partnerships (PPP), it will be essential to improve efficiency in transport infrastructure contracting and financing while at the same time strengthening the capacity of sector ministries, the regulatory agencies and the PPP promotion agency.

15. The proposed project is expected to support the GoC's reform and modernization agenda in the transport sector by focusing on strengthening: (a) transport planning; (b) road asset management; (c) road safety; and (d) air transport safety and security. More specifically, it will support the design and implementation of the Transport Priority Investment Program (TPIP), which is a key output of the integrated intermodal transport strategy (IITS) currently being prepared under the World Bank-financed Cameroon Multimodal Transport Project (CMTP). The TPIP is expected to help the GoC move from its current ad-hoc approach to transport investment financing by providing a holistic platform on which to base investment and financing decisions. The proposed project will also strengthen the capacity of line ministries responsible for transport planning and development in specific areas such as traffic monitoring and demand forecasting to facilitate the planning process and the efficient use of resources.

Institutional Context

16. Cameroon carried out major transport sector institutional reforms in the 1990s with the objective of: (a) attracting private investments through PPP/concessions; (b) improving the efficiency of road asset management through the establishment of a second generation RF and through more stringent axle load control; and (c) liberalizing service delivery on most transport modes (air, land and maritime). These reforms have generally led to improved sectoral performance and have also attracted significant amounts (about US\$2 billion over the last decade) of funding from development partners, including the World Bank.

17. Under the current GoC organization, the Ministry of Economy, Planning and Regional Development (*Ministère de l'Economie, de la Planification et de l'Aménagement du Territoire -*

MINEPAT) is in charge of the GoC's investment planning and prioritization for all sectors including transport. The newly created Ministry of Public Contracts (*Ministère des Marchés Publics* - MINMAP) is in charge of all major government procurement, as well as the validation of all interim payment certificates. For the transport sector, the Ministry of Transport (*Ministère des Transports*, MINT) is in charge of sector policy, regulation, and planning while the Ministry of Public Works (*Ministère des Travaux Publics* - MINTP) is in charge of the design, implementation, and operation and maintenance of sector investments, and is now the engineer of the Government for all infrastructure projects.

C. Higher Level Objectives to which the Project Contributes

18. **Government higher level sectoral objectives.** The proposed project directly supports the GoC's objectives and priorities in the transport sector as articulated in its DSCE 2010-2020 and Vision 2035 strategic documents. In the DSCE, the GoC recognizes transport infrastructure constraints as a major economic developmental issue, with the transport sector objective being to “*substantially increase the access rate to infrastructure by generating supply to anticipate demand*”. To achieve this objective, the DSCE emphasizes: (a) transport infrastructure maintenance; (b) preservation of existing infrastructure through rehabilitation; (c) development of a national transport infrastructure backbone; and (d) strengthening of institutional capacity as well as private sector and human resource development. More specifically, the proposed project will complement the ongoing and planned transport investments in support of Cameroon's DSCE, which are financed by the GoC and its development partners, including the World Bank, the European Union, the African Development Bank (AfDB), the French Development Agency (*Agence Française de Développement*), the Japan International Cooperation Agency, the Islamic Development Bank, and the Development Bank of Central African States (BDEAC).

19. **Systematic Country Diagnostic and Country Partnership Framework.** The proposed project is aligned with the new World Bank Group (WBG) Country Partnership Framework (CPF) for Cameroon for the 2016-20 period, which is currently under preparation and scheduled to be discussed by December 2016, and is based on the priorities identified under the Systematic Country Diagnostic⁶ (SCD). More specifically, the proposed project will contribute to two of the main pillars of the CPF, namely, infrastructure and private sector development and the strengthening of the PPP regulatory environment. The proposed project is also fully aligned with Cameroon's 2010-13 CAS⁷ discussed by the World Bank's Board of Executive Directors (Report number 52997-CM), of which the first strategic theme aims at increasing Cameroon's competitiveness through “increased infrastructure investments in the energy, transport, and telecommunication sectors”.

20. **The World Bank's twin goals.** The World Bank Group's twin goals of ending extreme poverty and promoting shared prosperity are closely associated with the Government's DSCE/Vision 2035, which is to achieve higher middle-income status and reduce poverty to 10 percent by 2035. Furthermore, the proposed project's target area is the North-West region of Cameroon, which according to the 2015 Household Survey, is classified as among the poorest regions in the country. The North-West region is landlocked, and derives most of its economic

⁶ SCD for Cameroon, dated December 9, 2015.

⁷ <http://go.worldbank.org/KK4RJYI0P0>

activity from the sale of highly perishable agricultural produce to consumption centers south of the country, including in neighboring Equatorial Guinea and Gabon. The current poor state of road infrastructure along the corridor is one of the key causes of under development in the region, where poverty has stagnated between 2001 and 2014, according to the Fourth Cameroon Household Survey released in 2015.

II. PROJECT DEVELOPMENT OBJECTIVES

D. Proposed Project Development Objective

21. The project development objective (PDO) is to: (a) strengthen transport planning; (b) improve transport efficiency and safety on the Babadjou-Bamenda section of the Yaoundé-Bamenda transport corridor; and (c) enhance safety and security at selected airports.

22. The PDO results indicators are presented in Section VII (Results Framework) of the PAD.

E. Project Beneficiaries

23. The proposed project is expected to bring important benefits to the GoC, the tradable sectors of the economy, road infrastructure users and the local population living along the Yaoundé-Bafoussam-Bamenda (about 364 km) road corridor.

24. **Government.** The institutional strengthening activities of the proposed project should help align sector objectives, strategies and policies to the Government's development agenda. This, together with the targeted investments, should generate efficiency gains in a sector that is a major contributor to economic growth and poverty alleviation.

25. **Road users and general population.** The direct beneficiaries of the proposed road works on the Babadjou-Bamenda section will be the users of the Yaoundé-Bafoussam-Bamenda corridor, including the populations of Cameroon's four largest cities of Douala, Yaoundé, Bamenda and Bafoussam. Smaller towns, villages and rural settlements along the road section will also benefit directly from the complementary rural roads and social infrastructure that will be financed by the proposed project. Also, the proposed project is expected to boost trade and tourism in the region, thus creating additional indirect jobs in these sectors. Local residents will benefit from direct employment through the proposed civil works.

26. **Airport users.** The proposed project will support activities to ensure that Cameroon's key international airports meet ICAO's safety and security standards. This should improve international air services to/from Cameroon with positive impacts on the tradable sectors of the economy and on tourism.

III. PROJECT DESCRIPTION

27. The proposed project design and scope blends targeted transport investments in road and airport infrastructure with institutional strengthening activities to improve the performance of the transport sector in key areas such as planning, road asset management, road safety and airport

safety and security. With regard to road investments, the proposed project complements the US\$220⁸ million in funding that the AfDB and the BDEAC are providing to the GoC to rehabilitate a key section (Yaoundé-Bafoussam of about 241.20 km) of the Yaoundé-Bafoussam-Bamenda transport corridor. For the institutional strengthening activities, the proposed project complements the road and airport safety and security activities supported by the World Bank and other development partners in Cameroon. What follows in Table 1 is a description of the key TA/institutional strengthening support activities for the transport sector in Cameroon.

Table 1: Development Partner-Supported Technical Assistance in Transport in Cameroon⁹

Technical Assistance Topic	Ongoing World Bank support	Planned World Bank Support	AfDB Support
Transport Planning, Trade Facilitation and Capacity Building	Elaboration of an IITS for Cameroon.	Preparation of legal and operational instruments toward the establishment of a transport regulatory body.	Technical assistance for the strengthening of the institutional capacity of the MINTP, specifically on improving monitoring, evaluation, and coordination of road construction projects.
	Skills audit for the Public Works Ministry staff.	Prepare legal and operational instruments toward the establishment of a regional road corridors management body.	Technical assistance to support the establishment of a single window for the compensation of project affected persons.
	Feasibility study on cargo tracking solution along the Douala/Ndjamena-Bangui corridor.	Technical assistance to support the implementation of the new CEMAC Trade and Transit regime.	Technical assistance to support the improvement and efficiency of governance and public expenditures in the Transport Sector.
	Study on transporters' fleet and merchandise movement in Cameroon.	Preparation of a ten-year TPIP.	Update of Cameroon's Road Master Plan.
	Elaboration of a strategic framework and implementation support plan for the PoD.	Training in transport planning, including data collection and establishment of modeling tools.	Identification and preparation of pilot transport infrastructure PPP projects and related training.
Road asset management & Road Safety	Optimization of the RF resources allocated to the MINTP.	Preparation of tools for the enforcement of the operational audit function of the RF, and the improvement of its financial and road maintenance programming capacity.	Diagnostic and analytical study on axle load and freight expenses in Cameroon.
	Design and implementation of a centralized database and research center for road traffic accidents in Cameroon	Preparation of design studies and bidding documents for output performance-based routine and periodic maintenance.	Technical assistance to support the establishment of OPBC in complement to what is envisaged by the World Bank on road maintenance.
	Diagnosis of emergency services and assistance to victims of road traffic accidents in Cameroon.	Development of tools for the enforcement of good governance and quality standards in road works design and execution, including a code of	Study for the establishment of a sustainable road asset management system in Cameroon.

⁸ Out of which BDEAC is providing US\$84million

⁹ Only WB and AfDB are essentially financing Technical Assistance in transport planning and Road asset management in Cameroon.

		ethics, road construction/maintenance and supervision guidelines and manuals, and related training.	
	Audit, replacement and maintenance works on road safety along the Douala-Kousseri corridor.	Carrying out road safety audits of four regional road corridors and design and implementation of pilot road safety projects resulting from audit results	
		Carrying out road safety baseline surveys and, socio-economic cost evaluations of road traffic accidents in Cameroon.	

28. The proposed project activities will be structured around three major components, with a fourth component supporting project implementation:

A. Project Components

Component 1: Transport Planning and Capacity Building (estimated costs US\$8.3 million equivalent, of which the World Bank will finance US\$8.3 million)

29. This component aims at strengthening the capacity of the public sector in the planning, development, management and maintenance of transport infrastructure. It will help develop multimodal transport benchmarks (MTBs) to be applied to the TPIP and the DSCE 2. Within this context, the proposed project will finance consultant services to help operationalize the transport modeling tools to be established under the ongoing World Bank-financed CMTP.

Subcomponent 1.1: Training in transport planning, including data collection and management of modeling tools (estimated cost US\$1.8 million equivalent)

30. This subcomponent seeks to develop sustainable capacity within selected Cameroonian institutions responsible for transport planning, with an emphasis on the practical management of multimodal transport planning. To ensure the sustainability of this capacity building activity, the proposed project will support the design of a transport planning course to be offered at one of Cameroon's universities. The content and scope of the course will be based on an initial needs assessment of academic and professional capacity available in Cameroon.

31. This subcomponent will support the following deliverables: (a) an assessment of the local context, including capacity to provide a sustainable transport planning program; (b) consultations with key stakeholders; (c) the design and testing of a curriculum that meets international standards; (d) definition of criteria and other conditions to help guide the choice of a local university that will host the transport planning program; and (e) the preparation and delivery of a short term training program to meet the immediate needs of the transport sector. This training program is aimed at addressing the needs of the ministries responsible for the implementation of the Integrated Intermodal Transport Strategy (IITS) and the TPIP.

32. It is expected that the first beneficiaries of the training program will be selected from staff of transport sector public institutions responsible for transport planning and from the staff of the

institution hosting the transport model.¹⁰ The first batch will have the responsibility to lead and manage the planning systems within the sector institutions while the second will form a nucleus of the staff responsible for the management of the transport model.

33. Finally, it is expected that the beneficiaries will acquire the following skills that are critical to transport planning:

- a. Data collection and processing techniques, including the conception of origin-destination surveys, traffic count surveys, economic analyses, stated preference studies, estimation techniques for modal and multimodal matrices, and induced traffic matrices.
- b. Transport networks modeling techniques using standard software and demand allocation algorithms, congestion modeling, choice of itinerary, time value estimation, generalized transport costs, and so on.
- c. Concepts and practical cases of strategic transport modeling.
- d. Optimization of fares in PPP projects to improve the internal rates of return (IRRs) and revenues.
- e. Planning and optimization of multimodal transport networks.
- f. Modeling and forecasting of freight demand.
- g. Modeling of air transport demand, the planning of airports, and analysis of the supply of air transport.
- h. Techniques and practical management and update of strategic transport planning as part of the country's transport development strategy.

Subcomponent 1.2: Institutional strengthening studies (estimated cost US\$1.2 million equivalent)

34. This subcomponent aims at providing the legal and operational architecture for transport regulation and management to support Cameroon in improving the efficiency and effectiveness of its transport sector. This is to clarify the roles and responsibilities of different stakeholders intervening in the transport sector in Cameroon. Similarly, transport corridors require specific institutional arrangements and management structures, considering their regional/spatial dimensions/impacts. Accordingly, this subcomponent will finance technical assistance/studies for the preparation of legal and operational instruments toward the establishment of: (a) a transport regulatory body; and (b) an inter-regional road corridor management entity, to help contribute to improving the country's domestic and foreign trade and Cameroon's position as a key regional integration player,

Subcomponent 1.3: Preparation of the transport priority investment program (TPIP) (estimated cost US\$2.9 million equivalent)

35. This subcomponent will finance technical assistance/studies to prepare a medium term TPIP programmatic planning tool for the transport sector in Cameroon, covering the priority transport sector investment projects that could be undertaken during the period. It will also serve as a planning tool to help the GoC in mobilizing budgetary resources for targeted transport

¹⁰ MINTP, MINT, MINEPAT, CCAA and the National Ports Authority.

investments in the transport sector, as well as carrying out the necessary techno-economic and engineering preparatory studies for such investments.

36. The TPIP will be a ‘rolling’ investment program based on a list of strategically prioritized transport projects selected from the Integrated Multimodal Transport Master Plan (IMTMP), which is expected to be ready by late 2018.¹¹ The priority transport infrastructure projects would be implemented within a three to five year period, covering the 20 year time horizon of the IMTMP. For each of the identified priority transport infrastructure projects, the TPIP will: (a) define the preliminary scope; (b) prepare prefeasibility, techno-economic feasibility studies and social and environmental studies; (c) conduct preliminary and detailed engineering studies; (d) define optimal methods of procurement (public, private or PPP); and (e) prepare bidding documents. This is to enable the GoC to have a prioritized ‘shovel ready’ transport infrastructure projects for funding by different sources (GoC, development partners and private sector).

Subcomponent 1.4: Identification and preparation of pilot transport infrastructure PPP projects (estimated cost US\$1.7 million equivalent)

37. The GoC is preparing proposals which will be ready by May 2017, of the three pilot PPP projects (two on road and one on airport infrastructure) that have reached a high level of maturity (available prefeasibility studies, including studies on potential demand and revenue) to be considered under this project. Based on these proposals, this subcomponent will finance technical assistance for: (a) screening of the potential PPP projects; (b) detailed feasibility studies, including the financial and ‘value for money’ analyses; (c) structuring of the PPP projects (optimal risk sharing), and preparation of bidding documents; (d) inviting lenders and potential investors to a roundtable on market surveys; (e) finalizing the conception of the PPP projects and bidding documents; and (f) recruitment of transaction consultants (legal, financial and technical) to help the GoC in launching the requests for proposals, selection, and negotiations of the pilot PPP projects.

Subcomponent 1.5: Development of a resilience and climate change adaptation strategy for land transport (estimated cost US\$0.7 million equivalent)

38. The GoC, in line with the Paris Conference on Climate Change (COP 21) Agreement, committed to reducing by 32 percent the greenhouse gas (GHG) emissions by 2035 through the Intended Nationally Determined Contribution (INDC). The development of a climate resilience and adaptation strategy for land transport by the proposed project will serve as the basis for policy formulation in terms of climate resilience in land transport (rail and road), as well as for climate change mitigation aspects (with emphasis on reduction of GHG emissions from transport). To ensure ownership, the Ministry in charge of Environment and the National Observatory on Climate Change will be involved at the early stage of the development of this strategy. This strategy will be aligned with Cameroon’s multi-sectoral Investment Plan on Climate Change and Disaster Risk Management, which is under preparation within the framework of IDA 17.

¹¹ The IMTP is expected to be completed on time to provide the benchmarks and scope for the transport component of the ten-year DSCE 2, which will cover the period of 2021-30.

Component 2: Road Transport Efficiency Improvement (estimated cost US\$141.4 million equivalent, of which the World Bank will finance US\$131.4 million and the GoC will finance US\$10 million)

39. This component is expected to reduce travel time between Babadjou and Bamenda by improving physical and safety conditions on the most degraded section of the priority road corridor linking the capital city of Yaoundé to Bamenda. It will also support the improvement of secondary roads and basic social infrastructures along the road section, to better distribute the socio-economic benefits that the proposed project is expected to generate in the project area.

Subcomponent 2.1: Rehabilitation and reconstruction of the Babadjou-Bamenda road section of the Yaoundé-Bamenda road corridor (estimated cost US\$107.7 million equivalent)

40. This sub-component aims at improving the high priority Yaoundé-Bafoussam-Bamenda road transport corridor, which requires urgent rehabilitation and upgrade works to provide a strategic link between the country's three key economic hubs (Yaoundé, Bamenda and Douala). This corridor is also part of the regional Trans-African Corridor from Lagos to Mombasa. The planned road works are expected to boost trade with neighboring Nigeria, strengthen the economy of the country's North-West and Western regions, and enhance the socioeconomic cohesion between its Francophone and Anglophone parts.

41. This subcomponent will finance the following critical activities:

- a. Full reconstruction of the 35 km section of National Road number 6 (RN6) between Babadjou (Western Region) and Bamenda (North-West Region), including the improvement of major accident spots identified on this section.
- b. Rehabilitation of 12 km of existing urban roads within Bamenda to link the Bamenda-Enugu (border with Nigeria) and the Bamenda-Yaoundé sections of the regional corridor from Nigeria to Cameroon.
- c. Construction of about 5 km Bamenda hill up station by-pass to connect Bafoussam with Bamenda through the eastern access road.
- d. Supervision consultant services to supervise the Babadjou-Bamenda, Bamenda urban roads and Bamenda up station hill by-pass.
- e. Engineering and supervision consultant services for the design and implementation of socio-economic infrastructure in the project impact area.
- f. Implementation of social and environmental mitigation measures triggered by the civil works planned under the proposed project and as outlined in its environmental and social management plan¹².

42. ***Typology of works for inter-urban section.*** The planned road works for the 35 km inter-urban section will generally involve the reconstruction of an existing 7 meter two lane standard with 1.5 meter shoulders giving a 10 meter paved riding surface. Sections with heavy roadside activities such as markets will be widened to about 16 meters. Sharp curves will be realigned to improve road safety. To improve the climate resilience of the road, existing drainage

¹² An environmental and social impact assessment has been carried out for this component from which will be derived an ESMP.

structures/culverts will be added and/or improved, together with the construction of four new small bridges with an average span of about 12 meters.

43. ***Typology of works for Bamenda hill and urban section.*** The Bamenda hill by-pass and the urban crossing will be improved to a 4 lane carriage way standard with 2 meter pedestrian sidewalks and a central separator in some sections. The works on these two sections include the construction of a bridge on the by-pass and the improvement of nine major road intersections.

Subcomponent 2.2: Provision of complementary infrastructure along the Babadjou-Bamenda Road section (estimated cost US\$20 million equivalent of which the World Bank will finance US\$10 million and the GoC will finance US\$10 million)

44. This subcomponent will finance civil works, equipment and consultant services related to the provision of infrastructure, to enhance access to agricultural production zones and provide basic social services along the Babadjou-Bamenda road section. The GoC will provide parallel financing for 25 km of the 50 km of secondary roads to be financed under the proposed project. The rest of the activities will be financed by the World Bank's loan. This is to better integrate the Babadjou-Bamenda road section with the area that it traverses, which accounts for most of the country's production of vegetables, and to provide basic services to rural populations in the area. The type of infrastructure works to be financed under this sub-component includes: (a) paving of existing selected secondary roads to a low cost standard to enhance access from agricultural production areas to the Babadjou-Bamenda road section; (b) a limited number of small markets along the selected secondary roads; and (c) a limited number of wells/minor water supply schemes in villages along the selected secondary roads. The choice of infrastructure to be selected under this sub-component will be demand-driven and based on criteria to be defined consultatively with the local councils and community development leaders. Furthermore, the planned road investments will be subject to basic economic screening.

45. The proposed project will finance the following: (a) consultations/studies to assist local communities in selecting of the planned infrastructure; (b) preparation of techno-economic feasibility studies; (c) preparation of social and environmental studies; (d) preparation of engineering studies and bidding documents; (e) civil works; and (f) consultant supervision and quality audit services.

Subcomponent 2.3: Strengthening road safety oversight (estimated cost US\$7.0 million equivalent)

46. A detailed action plan to improve road safety is outlined in the Cameroon National Road Safety Strategic Action Plan, which covers the 2010 to 2020 period. However, the plan is not adequately supported by resources, data and data management systems. This sub-component will support the implementation of parts of the action plan, which focuses on minimizing deaths or serious injury by addressing their key causes which include: (a) poor road infrastructure (no speed-calming measures, unguarded roadside hazards, lack of crosswalks, physical medians, sidewalks, and unpaved shoulders); (b) poor driving behavior; (c) unlicensed drivers; (d) poor enforcement of the road code; (e) poor post-crash emergency care; and (f) weak system of certification and enforcement of vehicle operation standards.

47. A road safety database and monitoring system is to be established by December 2016 under the ongoing CEMAC TTFP. To ensure its long term sustainability, the design of the system will include management requirements and appropriate cost recovery mechanisms. The sub-component will help operationalize the system by focusing on the elements that could not be financed under the CEMAC TTFP. The proposed project will finance technical assistance to ensure the full operationalization of the road safety database. It will also explore the feasibility of linking the road safety database to a common database that is easily accessible to insurance companies, the police, the gendarmerie, and other stakeholders.

48. In addition, the subcomponent will finance: (a) road safety baseline surveys (seatbelt wearing, speeding, drunk driving, and so on); (b) a study to estimate the socio-economic cost of road traffic accidents to complement data entry into the newly designed database and monitoring system; (c) the purchase of four radar cameras for speed control (with complementary equipment) for gendarmerie enforcement along the Yaoundé-Bafoussam-Bamenda corridor; (d) road safety design audits of some major corridors; (e) implementation of priority audit recommendations carried out as variations to the main contract along the Babadjou-Bamenda road section; and (f) design and implementation of pilot road safety projects in support of defined targets as outlined in the National Road Safety Strategy Action Plan.

49. It is expected that the works financed under Subcomponent 2.1 and Subcomponent 2.2 will include measures such as pedestrian crossings, rumble strips, traffic signs in built-up areas, increasing the space available for pedestrians and non-motorized traffic in populated areas, installation of roadside safety barriers, improvements of dangerous curves and intersections, and traffic signs and road markings at dangerous locations.

Subcomponent 2.4: Strengthening of road asset management through provision of technical assistance and equipment (estimated cost US\$6.7 million equivalent)

50. This subcomponent will complement activities already funded by the AfDB that are focused on strengthening Cameroon's RF and improving axle load controls. More specifically, it will finance the following:

- a. On-the-job training/TA for MINTP and MINMAP staff in the conduct of design studies and the preparation of bidding documents for a ten year OPBC of roads that either have been or are being constructed that will include the 52km Babadjou-Bamenda road section of the Bamenda-Yaoundé corridor. The planned OPBC contract on the Babadjou-Bamenda road section will complement the AfDB's implementation of a similar OPBC contract for the Yaoundé-Bafoussam section of the corridor that will be financed by the GoC by the end of 2019.
- b. Development of tools for the enforcement of quality standards in road works design and execution, including a code of ethics, guidelines, and manuals for road construction/maintenance and supervision, and related training.

- c. Strengthening of road network monitoring and management, including condition and traffic surveys and related training.

Component 3: Air Transport Safety and Security Improvement (estimated cost US\$48.7 million equivalent, of which the World Bank will finance US\$45.7 million and the CCAA will finance US\$3 million)

51. This component focuses primarily on facilitating ICAO's effective implementation (EI) rating of Aerodrome and Ground Assistance (AGA) at project airports (Yaoundé, Douala, Garoua and Maroua), as well as the ICAO's rating of Cameroon's security oversight system. Furthermore, it will build on and complement the achievements of the World Bank-financed West and Central Africa Regional Safety and Security Strengthening Project. Finally, it also supports air transport security and safety capacity building. A detailed description of the sub-component/activities supported by this component is provided under each subcomponent.

Subcomponent 3.1: Strengthening of airport safety and security infrastructure (estimated cost US\$44.7 million equivalent, of which the World Bank will finance US\$41.7 million and the CCAA will finance US\$3 million)

52. This subcomponent will comprise the following sets of activities:

- a. **Construction of three crisis management centers (CMCs) at the Yaoundé-Nsimalen, Garoua and Maroua-Salak airports.**
- b. **Construction and rehabilitation of security perimeter fences at the Douala and Yaoundé-Nsimalen airports.** More specifically this sub-component will focus on rectifying shortcomings in the existing perimeter fences by focusing on the following three fencing standards: (i) a concrete barrier type fence for high-risk areas; (ii) steel bar type of fence built on a low wall for low-threat areas; and (iii) a concertina wire type of fence in a no-obstacle area or at the end of the landing and takeoff runway.
- c. **Improvement of the existing security perimeter roads around the Douala and Yaoundé-Nsimalen airports.** All-weather roads around the security perimeter of airports are essential in an emergency for the rapid intervention of aircraft rescue and firefighting services or police/gendarmerie. In Douala, the project will pave the existing 13.8 km patrol road, which is entirely located within the airport boundary alongside the security fence. In Yaoundé-Nsimalen, the sub-component will improve the road around the airport, which is a priority for the local population and for airport security and safety.
- d. **Carrying out studies to identify the basic socio-economic infrastructure needs for the populations living around the four airports.** Environmental and social conflicts occur regularly around airports and can become acute in the case of new construction. Provision of social infrastructure in favor of the local populations aims to avoid conflicts and ensure the acceptance of projects and their local integration.

- e. **Purchase and installation of airport security equipment.** This activity will finance the purchase and installation of: (i) electronic surveillance and screening equipment to monitor passengers and freight in the four airports, including the acquisition of equipment, training tools and manuals for the CDOUs; (ii) video surveillance equipment; and (iii) access control equipment. Bidding documents will include provisions for suppliers to provide maintenance and spare parts over the useful life of such equipment.
- f. **Update of the safety management systems at the four airports.** The ICAO's new Annex 19 on Safety Management, which went into effect prescribes a State Safety Program (SSP) for all member states and Safety Management Systems (SMS) for all operators including airports. The SMS has been specifically required to be applied to international airports since November 2005. As part of the SSP, the CCAA has developed a draft of the Cameroon's National Safety Program (NSP) and guidance material for SMS implementation. The SMS will supplement the NSP by providing a systematic and proactive approach that includes: (i) documenting identified hazards safety and their mitigation measures; (ii) monitoring and measuring the ongoing safety experience of the airport; (iii) establishing a voluntary non-punitive safety reporting system that can be used by employees of the airport operator, airlines, and tenants; and (iv) improving the entire airport's safety culture. This subcomponent will finance the following:
 - i. Updating Cameroon's NSP and the SMS guidebook covering the concepts, methodologies, processes, tools, and safety performance measurements that can be applied by airports based on their level of operations and complexity, with the ultimate objective of facilitating the certification of said airports.
 - ii. Preparing accompanying action plans for mainstreaming the implementation of SSP and the SMS into the National Civil Aviation Plan.
 - iii. Strengthening the Internet-based incident monitoring mechanism within the CCAA and at each airport for monitoring compliance with the SMS.
- g. **Purchase of security vehicles and luggage management systems**

Subcomponent 3.2: Strengthening air transport safety and security oversight (estimated cost US\$1.6 million equivalent)

53. This subcomponent will be composed of three main activities:

- a. Training in air transport safety and security oversight. The subcomponent will finance technical assistance and training to:
 - i. Improve and update the aviation library established under the first regional project, to become an online Internet platform.
 - ii. Update the CCAA's stock of mandatory aviation manuals and establish a system for their systematic renewal and subscription.
 - iii. Train CCAA staff responsible for safety oversight and on the implementation of SSP including the monitoring of the SMS of airports.

- iv. Train CCAA staff to become trainers of safety managers in airport safety management.
 - v. Conduct training programs and workshops at airport premises targeting airport operators and users on various aspects of the SSP and SMS.
 - vi. Support study tours for government and CCAA aviation staff as part of on-the-job learning to facilitate policy and program design and implementation.
- b. **Diagnostic Studies.** The subcomponent will finance diagnostic studies to collect baseline information for the Cameroon civil aviation industry and prepare medium term programs and long term plans toward full compliance with the ICAO's SARPs. The medium term programs will form part of the activities to be implemented in follow-on projects. The diagnostic studies will be conducted in a single technical assistance contract covering the 19 ICAO's civil aviation annexes.
- c. **Regulation.** In 2013 Cameroon enacted a new civil aviation law that was judged to meet international standards by the ICAO's audit experts. The subcomponent will finance updating of the corresponding regulatory framework in the various areas of civil aviation, as required under the ICAO's standards.

Subcomponent 3.3: Strengthening of planning capacity in air transport (estimated cost US\$2.4 million equivalent)

54. This subcomponent will finance technical assistance, equipment, training and studies to assist CCAA in: (a) designing and establishing an operational air transport data bank; (b) designing and developing of tools/methodologies (including planning tools) for the more efficient supervision of air transport activities; (c) updating of air safety and security regulations and procedures; (d) designing and establishing a monitoring framework, with tools and training for the effective implementation of Corrective Action Plans (CAPs) of compliance audits; (e) air security standards compliance audits and assistance with implementation of their recommendations; (f) airport safety awareness campaigns; and (g) communication and citizen engagement with stakeholders affected by airport operations.

Component 4: Support to Project Implementation Management and Monitoring (estimated cost US\$8.3 million equivalent, of which the World Bank will finance US\$ 6.6 million and GoC will finance US\$1.7 million)

55. This component will finance technical assistance, equipment, training and operating costs for the following:
- a. Project management and implementation oversight.
 - b. Project monitoring and evaluation (M&E).
 - c. Operating costs of the two PIUs, one responsible for Components 1 and 2 and the other responsible for Component 3.
 - d. Front end Fee

B. Project Cost and Financing

56. The estimated project cost is US\$206.7 million, the details of which are presented in Table 2. The proposed project will be financed by an IBRD Euro currency loan estimated at US\$192 million equivalent. The GoC/CCAA will be providing parallel counterpart financing in the amount of US\$14.7 million under Sub-component 2.2 (for the improvement of 25 km of existing secondary roads), Component 3 (acquisition of airport luggage management systems and vehicles), and Component 4 (project monitoring and management support). The estimated total project cost is reflected in Table 2 and is net of all applicable taxes, levies, and duties. The GoC will grant tax exemption on all project activities.

57. **Retroactive financing.** The GoC has requested a retroactive financing provision of up to 20 percent of the IBRD loan to fund: (a) civil works; (b) the displacement of utilities along the Bamenda-Babadjou road works; (c) consultant services linked to the preparation of this project and (d) project activities implemented prior to the IBRD loan effectiveness.

Table 2: Estimated Project Cost and financing (US\$ millions)

Project Components	Project Cost	IBRD Financing	GoC Financing	% IBRD Financing	% GoC Financing
Component 1: Transport Planning and Capacity Building (US\$8.3 million)					
1.1. Training in transport planning, including data collection and management of modeling tools	1.8	1.8	0.0	100%	0%
1.2. Institutional strengthening studies	1.2	1.2	0.0	100%	0%
1.3. Preparation of the Transport Priority Investment Program (TPIP)	2.9	2.9	0.0	100%	0%
1.4. Identification and preparation of pilot transport infrastructure PPP projects	1.7	1.7	0.0	100%	0%
1.5. Development of a resilience and climate change adaptation strategy for land transport	0.7	0.7	0.0	100%	0%
Component 2 : Road Transport Efficiency Improvement (US\$141.4 million)					
2.1. Rehabilitation and reconstruction of the Babadjou-Bamenda road section, of the Yaoundé-Bameda road corridor	107.7	107.7	0.0	100%	0%
2.2. Provision of complementary infrastructure along the Babadjou-Bamenda Road section					
2.2.1. Improvement of existing secondary roads (25km), small market infrastructure and minor water supply schemes in villages along the selected secondary roads	10.0	10.0	0	100%	0
2.2.2. Improvement of 25 km of existing secondary roads	10.0	0	10.0	0	100%
2.3. Strengthening road safety oversight	7.0	7.0	0.0	100%	0%

2.4. Strengthening of road asset management through provision of technical assistance and equipment	6.7	6.7	0.0	100%	0%
Component 3 : Air Transport Safety and Security Improvement (US\$48.7 million)					
3.1. Strengthening of airport safety and security infrastructure					
<i>3.1.1. Airport screening and crisis management equipment,</i>	17.2	17.2	0	100%	0%
<i>3.1.2. Airport infrastructure improvement,</i>	24.5	24.5	0	100%	0%
<i>3.1.3. Acquisition of luggage management systems and vehicles</i>	3.0	0	3.0	0%	100%
3.2. Strengthening of air transport safety and security oversight	1.6	1.6	0.0	100%	0%
3.3. Strengthening of planning capacity in air transport	2.4	2.4	0.0	100%	0%
Component 4 : Support to Project Implementation Management and Monitoring (estimated cost US\$8.3 million equivalent)					
4.1. Road component monitoring and management support	4.1	4.1	0	100%	0%
4.2. Air transport component monitoring and management support	2.0	2.0	0	100%	0%
4.3. Road component coordination support	0.9	0	0.9	0%	100%
4.4. Air transport coordination support	0.8	0	0.8	0%	100%
4.5. Front end fee	0.5	0.5	0	100%	0%
Total without taxes	206.7	192.0	14.7	93%	7%

C. Lessons Learned and Reflected in the Project Design

58. The proposed project builds on the World Bank's long standing experience of successfully implementing transport projects in Cameroon, and in Sub Saharan Africa, looking in particular at: (a) strong client ownership; (b) streamlined project design and scope; (c) high quality at entry and implementation readiness; (d) strong project management capacity; (e) robust compliance with the World Bank's social, environmental, financial management (FM), and procurement rules and requirements; (f) completion of land acquisition and implementation of Resettlement Action Plans (RAPs) and Environmental and Social Management Plans before the start of the construction works; (g) mobilizing strong contractor and consultant capabilities; and (h) continuity of key recipient and World Bank project related staff.

59. A specific lesson learned from implementing past and ongoing projects in Cameroon is the need to selectively apply the Paris Conference on Aid Alignment and Harmonization, especially in the context of complex inter-agency and intermodal approaches such as those being proposed for this project. Hence, the existing implementation units that were set up to implement the

transport programs financed by the World Bank and other development partners will be maintained for the proposed operation.

60. With regard to air transport, a key lesson from the completed air transport operation is the lack of a mechanism to sustainably maintain infrastructure and equipment provided for airport operations. The proposed project will address this shortcoming by emphasizing systematic mainstreaming of maintenance through appropriate budgetary allocations to cover the ongoing maintenance of buildings and other investments financed under the project.

IV. IMPLEMENTATION

A. Institutional and Implementation Arrangements

61. The MINTP will be responsible for the road transport aspects of the project. The CCAA, which is an autonomous body under the technical supervision of the Ministry of Transport, will be the implementing agency for the air transport aspects. A subsidiary agreement will be signed between the CCAA and the Government.

62. Implementation coordination and oversight responsibility for the proposed project will be exercised by a joint coordination and steering committee chaired by the Minister of Public Works. The steering committee will be supported by a technical monitoring committee in charge of monitoring project activities and monitoring the implementation of decisions of the steering committee. The technical committee will be staffed by qualified technical experts chosen for the most part from the line ministries and CCAA.

63. The implementation of the road transport elements of the proposed project will be carried out by the MINTP's existing Cellule BAD-BM. This unit, which handles a total lending program of US\$1.4 billion, has grown in staffing proportionately to the increase in its portfolio. They manage two key World Bank-financed projects, including the multifaceted CEMAC TTFP, as well as other projects supported by the AfDB and other multilateral and bilateral donors. The unit has experienced staff and is supported by a strong cadre of consultants. Although part of the Cellule BAD-BM's staff has limited experience, a performance assessment mechanism is being put in place under a new experienced manager together with hands-on training agenda. This should improve the performance of the unit.

64. The air transport component of the proposed Project will be implemented by the Project Implementation Unit (*Unité de Gestion du Projet*, UGP) CCAA, a unit established under the World Bank-funded Regional Air Transport Safety and Security project.

65. Both units will be reinforced with some additional staff to facilitate the implementation of the proposed project.

B. Results Monitoring and Evaluation

66. The project's Monitoring & Evaluation (M&E) indicators are presented in Section VII (Results Framework). The overall responsibility for M&E will formally lie with the two implementation units - MINTP and CCAA. They will prepare bi-annual progress reports on the

various components under their responsibilities, with contributions from other stakeholders, which they will make available to IBRD within 45 days from the end of each reporting period. These reports will detail physical progress in respect of the indicators in the Results Framework. The reports will also contain a summary of the status of the implementation of the Environmental Management Plans and RAPs associated with the improvement of road and airport infrastructure as described in this document. An independent technical auditor will be recruited when necessary, to provide technical opinion to guide implementation and supervision of the project.

C. Sustainability

67. For the main physical investment proposed under the proposed project (reconstruction of the Bamenda-Babadjou road section), the contractor will be in charge of routine maintenance during the one-year defect liability period after the improvement works are completed. To ensure the long term sustainability of the road reconstruction works, together with the sustainability of other investments on the same corridor, the GoC plans to put in place a ten-year OPBC for routine and periodic maintenance of the Yaoundé-Bamenda-Enugu corridor. The OPBC will be prepared as part of the proposed project, and will be made effective as soon as the liability period for the completed road works contracts is over.

68. To ensure the sustainability of the transport planning program, training will be anchored within a public university and eventually mainstreamed into its curriculum before the end of the project. The mainstreaming of transport planning will be done sequentially as follows. The first phase will focus on the training of trainers while the second phase will help the local university design and implement a curriculum in transport planning, to be offered as a paid course at the graduate level.

69. With regard to air transport, a key lesson from the completed regional air transport safety and security improvement project is the lack of a mechanism to sustainably maintain infrastructure and equipment provided for airport operations. The proposed project will enforce maintenance and management contracts of airport infrastructure and equipment.

70. Finally, the proposed project also includes feasibility studies and the design of legal and operational instruments to be put in place to improve road asset management and transport regulations, as part of measures to promote sustainability and efficient use of investments, as is the case in other infrastructure sectors in Cameroon (telecommunication, energy and water).

D. Role of Partners

71. The proposed project is part of a planned larger investment program for the transport sector. More specifically, the development partners' engagement in the transport sector will be articulated through an integrated intermodal transport program that will support the Government's development strategy over the medium term between now and 2025. To support the Government's development strategy (DSCE), the proposed program will have the twin objective of: (a) improving planning and implementation of a multimodal transport investment strategy; and (b) transforming transport assets management.

72. This program will benefit from parallel financing of other international financial institution (IFIs) such as the AfDB. The AfDB and the BDEAC are funding the rehabilitation of a complementary road section of 241.20 km (at US\$220¹³ million) of the Yaoundé-Bafoussam-Bamenda corridor. Furthermore, the AfDB is funding institutional strengthening activities in the transport sector and an effectiveness audit of the common PIU that implements all development funded projects in the transport sector.

V. KEY RISKS

73. **Political and governance risks.** This risk is rated **High**. Any major slippages in the start of the Bamenda-Babadjou road works may intensify pressures on the GoC to switch to other sources of financing, as was the case before the World Bank became involved in this operation. While there is a risk that priorities might change in the event of a cabinet reshuffle, the GoC has demonstrated its commitment in implementing the DSCE particularly with respect to its high priority infrastructure investments. To mitigate this risk, procurement of the Bamenda-Babadjou road works contract has been advanced together with project preparation, and works are expected to start in January 2017. Also, a robust monitoring mechanism has been agreed with the GoC to guard against any slippage during works execution.

74. The country's weak governance structure continues to hold back local business development and its ability to attract foreign investments. Despite the intensification of investigations and indictments of public officials suspected of corruption, as well as greater empowerment of civil society and increased press freedom, there is no evidence that corruption has been reduced in Cameroon. In this regard, specific oversight measures, including a result-based system within the borrower's institutions, will be implemented for all World Bank-funded projects. For the proposed project, the recruitment of a monitoring specialist and an independent technical auditor is planned to ensure the proper execution of the major project activities.

75. **Macroeconomic risk.** The macroeconomic risk to the development objectives of the proposed project is **Moderate**, given that it is financed through ring-fenced external funding. As such, even though the macroeconomic situation is currently vulnerable to external (commodity prices) and internal (security challenges in the north) shocks, the proposed project should not be directly impacted by them.

76. **Institutional capacity for implementation and sustainability risk.** This risk is rated **High** due to conflicts in responsibilities of 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 were applied to the proposed project during appraisal and will be applied at implementation.

77. 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 loan effectiveness. The mandate of the Special tender boards for the two implementation agencies will be extended and adapted to facilitate smooth implementation. Also, the GoC started the process to address compensation very early during preparation and has confirmed that compensations will be fully

¹³ Out of which BDEAC is providing US\$84 million.

paid before the start of works. In addition, the MINTP has started the process of displacing (telephone, water, and energy) from the right-of-way of the Babadjou-Bamenda road before the start of the works. This commitment requires retroactive financing, the arrangements of which was discussed at appraisal and formalized during negotiations.

78. Finally, the sustainability risk associated with the proposed project will be mitigated as already discussed in section IV.C.

79. **Fiduciary risk.** The risks related to fiduciary administration are rated **High**. Procurement and FM staff may become overwhelmed by the multiplicity of activities and beneficiary institutions involved. The relatively limited experience in the implementation of World Bank-financed projects by the MINMAP and its insufficient skills for complex biddings could slow down the implementation of the project. Front-loaded procurement of the complex activities of the project and the recruitment of additional fiduciary staff are intended to mitigate these institutional and operational fiduciary risks.

80. **Environment and social risk.** This risk is rated **High**. This is because the road works to be financed under the proposed project comprise the full reconstruction of the existing Bamenda-Babadjou road section, which includes an urban section in Bamenda. The shifting of public utilities and the land/resettlement compensation process under Cameroonian law is extremely complicated and time consuming, and could lead to delays in the start of the road works. In addition, the Environmental Assessment procedures in Cameroon remain equally time consuming and bureaucratic, including several administrative stages (validation of TORs by Ministry of Environment, validation of the Final Environmental and Social Impact Assessment Report by the Inter Ministerial Committee). In an effort to directly address this issue, the Declaration of Public Utility (*Déclaration d'Utilité Publique*, DUP) has already been issued, and the land/resettlement compensation process is expected to be completed before the commencement of works. A methodological note was issued by GoC to guide the evaluation of compensation under the proposed project, in order to align such compensation with the proposed project's RAP and the World Bank's Operational Policy 4.12. The Environmental and Social Management Framework (ESMF) and the Resettlement Policy Framework (RPF) have already been validated by the World Bank, and published in-country and at the World Bank's InfoShop. Finally, critical measures to strengthen the capacity of the MINTP/ Cellule BAD-BM and CCAA in environmental and social management have been incorporated into the project's institutional arrangements (see section VI).

VI. APPRAISAL SUMMARY

A. Economic Analysis

81. **Road component.** The Babadjou-Bamenda road section currently carries about 2,000 vehicles per day. The direct impact of the road improvement works, include the reduction of travel time by approximately 90 minutes and a reduction in Vehicle Operating Costs (VOCs).

82. Since 1997, GoC's more effective enforcement of overloading rules and regulations has contributed significantly to the reduction of the aggressivity coefficients of axle loads on a standard asphalt highway of the type to be improved by this project. On average this coefficient is 1.26 for

a standard heavy truck and 0.3 per axle. These figures have been used to derive the number of standard axle equivalents over the 15-year life of the project investment, as presented in Table 3:

Table 3: Traffic Data on the Babadjou-Bamenda Road Section

Road Section	Standard Axle Equivalents (SAE)	Standard Axle Equivalents /2	Traffic Class
Babadjou - Welcome to Bamenda	6,254,016	3,127,008	T3 ¹⁴
Welcome to Bamenda - Ecole des champions	5,046,230	2,523,115	T3

83. Economic studies have been prepared together with the technical feasibility studies for the proposed civil works. A cost benefit analysis (CBA) was conducted using the VOC model which is based on the Highway Development and Maintenance Management model and which calculates VOCs based on the road's roughness and other technical parameters.¹⁵ Costs of the two sections of the road were discounted at 12 percent. The economic parameters of the works are summarized in Tables 4 and 5.

Table 4: Economic Analysis Parameters

Section	NPV (in million US\$)	Benefit/Cost Ratio	IRR (%)
S1 : Babadjou - Welcome to Bamenda	183.24	4.04	20.4%
S2 : Bamenda Hill bypass	12.49	1.40	16.9%
S3 : Bamenda urban crossing	486.44	13.47	47.0%
Full road length	682.11	7.55	30.8%

84. A sensitivity analysis based on several traffic and cost assumptions is summarized in Table 5. In the unfavorable case where cost increases by 20 percent or traffic drops by 15 percent, the IRR would drop to a minimum of 29.7 percent. The road's economic viability represented by both the IRR and the net present value (NPV) is largely insensitive to variations in investment cost or traffic.

Table 5: Sensitivity Analysis Parameters

Babadjou-Bamenda	NPV (in million US\$)	Benefit/Cost Ratio	IRR (%)
Cost increases by 20%	1 213.13	6.37	29.7%
Cost drops by 20%	692.93	8.72	31.8%
Traffic drops by 15%	619.89	6.86	29.7%
Traffic increases by 15%	722.53	8.00	31.2%

Note: At the Exchange rate: US\$1 = 550 frs CFA

85. **Air Transport component.** A CBA was conducted to determine the economic and financial viability of key investments to be financed under the project at the four international

¹⁴ T3 is the design traffic classification with number of equivalent daily traffic varying from 1 000 to 3 000 or with SAE ranging from $1.5 \times 10^6 - 4 \times 10^6$

¹⁵ https://wbg.app.box.com/files/0/f/11021244795/P150999_-_Etudes_Economiques

airports. The benefit stream was estimated conservatively, taking into account only incremental airport revenues and time savings expected to be generated by the new investments. The CBA compares the financial benefits that these investments will generate with their investment and maintenance costs, and derives NPVs at discount rates of 10 percent and 6 percent. The use of these values is justified by the social dimension of the projected investments and is consistent with the World Bank’s current directives. The results show a positive NPV in both scenarios and also an IRR of 13 percent. The analysis was based on the following assumptions:

- 10 percent levy increases every five years from 2020 with project;
- Aircraft dwell time savings of 20 percent;
- Induced traffic = 0 percent (no project activity is of a nature to induce traffic);
- Normal passenger and freight traffic growth of 6percent annually;
- Normal aircraft movement growth = 3 percent annually;
- Maintenance costs doubles every five years from 0.05 percent in the first year.

Table 6: Economic Analysis Parameters

Activity	NPV (in million US\$)	Benefit/Cost Ratio	IRR (%)
Airport Investments	36	3	13%

86. A sensitivity analysis shows that the IRR would rise to 17 percent if cost decreased by 20 percent and would drop barely by 2 percentage points to 11 percent in the event of a cost increase of 20 percent. The IRR would drop by three percentage points to 10 percent if benefits reduced by 20 percent. Hence, the economic viability of the airport investments is largely sensitive to decreases in costs but insensitive to increases in costs or reductions in benefits.

Table 7: Sensitivity Analysis Parameters

Babadjou-Bamenda	NPV (in million US\$)	Benefit/Cost Ratio	IRR (%)
Cost drops by 20%	46	4	17%
Cost Increases by 20%	27	3	11%
Benefits drop by 20%	24	3	10%
Benefits increase by 20%	60	4	16%

Note: At the Exchange rate: 1 US\$ = 550 frs CFA

87. **Socio-economic infrastructure.** The provision of socio-economic infrastructures will increase the economic impact of the Babadjou-Bamenda road section by improving secondary road infrastructure linking this corridor to neighboring agricultural production and touristic zones. The market infrastructure to be provided by the proposed project will help improve transport fluidity and reduce the occurrence of accidents on the Babadjou-Bamenda road section which is constantly encroached by road-side vendors. The market sheds to be constructed will serve as permanent vending points for these vendors. It would equally generate direct and indirect economic benefits such as: (a) increased income for participating smallholders/producers; (b) reduced transaction costs and post-harvest losses; (c) increased value added retained at the producer level within the food crops and vegetables value chains; (d) enhanced market/business opportunities and economies of scale benefiting all actors of the supply chains; (e) enhanced bargaining power, understanding of markets, and management capacity among smallholder; (f) incremental on- and

off-farm employment; and (g) improved social stability in project zones. These infrastructures would have a positive impact on participating women, youth, and households headed by women.

Value Added of World Bank's support:

88. The proposed project will benefit from the ability of the World Bank to tap and deploy in an agile manner global knowledge on comprehensive and innovative approaches to sector reforms, which are directly relevant to Cameroon. The proposed project will also benefit from the World Bank's unique experience with specific and tested solutions, including the establishment and operation of RFs, multi-year output performance-based contracts (OPBCs), and PPPs.

89. The proposed project will also build on the World Bank's extensive experience/involvement in the modernization of the transport sector in Cameroon and globally by supporting key areas such as road asset management, transport planning, and road safety.¹⁶ More specifically, some of the proposed project activities will build on, complement, and support the institutional development activities supported under the ongoing World Bank funded CEMAC Transport-Transit Facilitation Program (TTFP) and the CMTP.

90. **Gender impact.** The proposed project will support gender mainstreaming in transport operations in two ways: (a) road contracts to be financed by the project will emphasize the employment of women and youth, especially in areas where agricultural production is the main economic activity; and (b) assessments to determine the baseline for gender-related indicators will be conducted as part of project activities along the Douala-Bamenda and Yaoundé-Bamenda corridors and will be used, to determine current access to markets for women and vulnerable persons (time, costs, losses, revenues, and so on).

B. Technical

91. **Road improvements.** Technical studies for the main road investment under the proposed project have been completed and reviewed by World Bank staff ahead of appraisal, to ensure implementation readiness.¹⁷

92. The adopted pavement design standards are expected to upgrade the road to the standards required for regional corridors in Cameroon, including measures to reduce vulnerability and the potential impact of climate change effects. Seven pavement standards were analyzed, taking into account environmental, cost and technical soundness. The one chosen is the least costly and also provides a more robust pavement structure with a design life of 20 years¹⁸. The design life could be increased to 25 years, once GoC implements the ten-year OPBC concept that is being promoted under the proposed project.

93. The pavement design standard proposed for the three sections under World Bank financing comprises a 250 mm stabilized natural material sub base, a 100 mm asphalt stabilized gravel base,

¹⁶ The World Bank has extensive experience in promoting road safety in Africa through its contributions to the Africa Road Safety Corridor Initiative, the Global Road Safety Facility and the Sub-Saharan Africa Transport Policy Program.

¹⁷ https://wbg.app.box.com/files/0/f/7964906997/P150999_-_Technical_studies

¹⁸ Most roads in Cameroon are designed with a life span of 15 years.

and a 700 mm asphalt concrete wearing course. The shoulders would be finished with double bituminous surface treatment. This solution was determined to be the least costly and most robust of the seven pavement variants that were studied.

94. The cost estimate is based on quantities derived from the engineering designs, applying unit prices from ongoing contracts. The reconstruction cost of the 12 km urban section with a dual carriage way is estimated at US\$2.6 million per km. This cost covers improvement works at seven street intersections. That of the by-pass is estimated at US\$3.0 million and includes the construction of a bridge and the improvement of two major road intersection, while the inter-urban section is estimated at US\$1.3 million per km (including a realignment at dangerous curves along this meandering section). While these costs further confirm the unusually high costs of road works in Cameroon, they do however match those registered on the Bamenda-Mamfe-Ekok sections of the same corridor completed with AfDB financing. Based on completed and ongoing projects, the cost of monitoring and supervision of works is estimated at 7 percent.

95. **Socio-economic infrastructure.** The type of infrastructure works will cover the: (a) paving of existing selected secondary roads to a low cost standard to enhance access from agricultural production areas to the Babadjou-Bamenda road; (b) limited number of small markets along the selected secondary roads; and (c) limited number of wells/minor water supply schemes in villages along the selected secondary roads. The deliverables will include improvement of about 50 km of secondary roads, improvement of about ten (10) water systems, construction and minor equipment of about 25 market sheds, screening, detailed design studies, environmental and social impact assessments (ESIAs), and supervision of civil works. Identification/confirmation of activities will be conducted in the early part of the first year of the project, immediately followed by relevant screening as described above.

96. **Airport infrastructure improvement.** Architectural and engineering studies for the Yaoundé CDOU were conducted in 2012 with World Bank assistance under the Regional Air Transport Safety and Security project, based on terms of reference reviewed by World Bank staff. These will require minimal updating during the processing of the proposed project. The other investments (equipment and works) are similar to those implemented under the same prior project. Hence the technical designs and construction standards have been maintained.

97. In order to determine the extent to which the project will contribute to **safety and security** at Cameroon's four international airports and for Cameroon's civil aviation sector, its activities and deliverables were matched to the relevant SARPs of the ICAO.

C. Financial Management

98. Project FM will be carried out by the *Cellule BAD-BM*, and the *UGP CCAA*. The proposed project FM arrangement will rely on the existing country FM arrangements put in place to manage donor-funded projects through the Autonomous Sinking Fund (CAA) equipped with dedicated tools developed by the World Bank Institutional Development Fund and the Ministry of Public Contracts in charge of ex ante control of all suppliers' invoices associated with a contract before any payment by CAA. In addition, the project will mostly rely on the existing arrangements at the implementing units.

99. The Cellule BAD-BM is adequately managing the ongoing CEMAC Transport and Transit Facilitation Project and the CMTP that is co-financed by the AfDB and the World Bank. The Cellule is endowed with one Finance Officer, two accountants and one Internal Auditor. There are no overdue audit reports to date and the external auditor's opinion on the last financial audit report is unqualified.

100. The UGP CCAA adequately managed the Cameroonian component of the former West and Central Africa Air Transport Safety and Security Project financed by the World Bank. The project closed on June 30, 2014, and most of the staff comprised CCAA personnel.

101. The Cellule BAD-BM and the UGP CCAA's FM system have been assessed to determine if: (a) adequate FM arrangements (staffing, budgeting, accounting, internal control, reporting, external audit) are in place to ensure that the project funds will be used for their intended purposes in an efficient and economical way; (b) financial reports will be prepared in an accurate, reliable, and timely manner; and (c) the project's assets will be properly safeguarded.

102. The assessment concluded that the new operation would add an additional burden on the FM staff, hence putting at risk their ability to provide timely and quality work. An organizational audit is being conducted of the Cellule BAD-BM to take stock of the current organizational challenges and provide recommendations for better organization and staffing. In addition, the internal auditor has resigned some months ago, and the recruitment of a replacement is underway. Consequently, the following mitigation measures are to be undertaken: (a) the existing computerized information system of the project implementation entities will be customized to record the project's transactions and prepare quarterly Interim Unaudited Financial Reports whose format was agreed upon during negotiations; (b) the amendment of the current administrative and financial procedures manual used by the project implementation entities 60 days after project effectiveness; (c) specifically, for the UGP CCAA an accountant and an internal auditor will be recruited; and (d) taking into account the additional burden, additional recruitments might be considered in the light of the organizational audit recommendations. The overall residual FM risk rating is **Moderate**.

103. Additional details on FM and disbursement arrangements are described in the Project Operational Manual.

D. Procurement

104. The overall procurement risk for the project is rated **High**, mainly due to: (a) the relatively limited experience of the MINMAP in World Bank-financed projects; (b) the potential conflict of interest for the MINMAP in relation to the management of complaints linked to contracts it directly handles; and (c) shortcomings in procurement operations and practices.

105. For Components 1 and 2, MINTP and MINMAP will share the procurement responsibilities depending on the value of the contract involved. For Component 3, CCAA will be in charge of procurement. Procurement capacity assessments of the implementing agencies were carried out in December 2015. These generated the following action measures to be taken by the respective implementing agencies. For UGP CCAA: (a) elaborate and submit a procurement plan

to the World Bank; (b) update a satisfactory version of the existing operational manual comprising a section on procurement for use by the project, and submission of this manual to the IBRD for approval latest 60 days after project effectiveness; (c) recruit a Procurement Specialist with satisfactory qualifications and experience. For the cellule BM-BAD: (a) elaborate and submit a procurement plan to the World Bank; (b) update a satisfactory version of the operational manual comprising a section on procurement for use by the project, and submission of this manual to the IBRD for approval latest 60 days after project effectiveness; (c) recruit a Junior Procurement Specialist with satisfactory qualifications and expertise; (d) amend the act establishing the existing special tender board in charge of co-financed projects within MINTP, in a manner deemed acceptable to the World Bank, such that the mandate of the board is broadened to cover procurement under this Transport Sector Development Project and its procurement thresholds are raised to accelerate procurement activities, except for the Babadjou-Bamenda road works.

106. For the CCAA Implementation Unit there will be a need to put in place a new special tender board for the proposed project activities, acceptable to the World Bank, with procurement thresholds high enough to allow it to handle all project procurement relating to airport infrastructure and equipment. Satisfactory implementation of the proposed above actions should bring the overall procurement risk to **Substantial**.

107. A Procurement Plan for project implementation has been prepared and discussed during appraisal. This plan, which covers the first 18 months of project implementation, has been discussed and agreed upon by the Borrower and the World Bank at negotiations. It will be available in the proposed project's database and a summary of it will be disclosed on the World Bank's external website once the project is approved by the Board. The Procurement Plan will be updated in agreement with the project team at least annually, or as required, to reflect the actual project implementation needs and improvement in institutional capacity.

108. Additional details on procurement arrangements are described in the Project Operational Manual.

E. Environment and Social (including Safeguards)

109. The proposed project has a moderate environmental impact and has been determined to be Category B. The Integrated Safeguards Data Sheet/Project Information Document, disclosed on August 18th 2016, provides more information about the associated safeguards risks and impacts, key safeguard policy issues and their management, and compliance with disclosure requirements. In general, World Bank safeguard policies triggered for this project are Environmental Assessment OP/BP 4.01, Physical Cultural Resources OP/BP 4.11, and Involuntary Resettlement OP/BP 4.12. An ESMF and an RPF were prepared and disclosed in-country on June 27, 2016, (www.mintp.cm) and on the World Bank's Info-Shop on July 08, 2016. An ESIA and Environmental and Social Management Plan are under preparation for the road (Babadjou-Bamenda) and air transport components. These documents will be disclosed by the borrower before effectiveness.

110. **OP. 4.12: Involuntary resettlement.** The DUP for the proposed project was signed on April 1, 2016, thus enabling the compensation process under national law to be launched early enough to ensure that it is adequately aligned with the World Bank's preparation process. With the support

from GoC, an Evaluation Commission was also established and instructed to use the World Bank's eligibility and compensation criteria and standards to avoid discrepancies between the Evaluation Commission list of affected persons and the RAP for the Babadjou-Bamenda road reconstruction works. Given the pioneering nature of this streamlined approach for land acquisition, the World Bank provided extensive technical support to the GoC's project team, and will continue to support them during the implementation of the final version of the RAP for the Babadjou-Bamenda road reconstruction works. The continued support of the focal point in the Prime Minister's office will be necessary to ensure that the compensation is paid efficiently so that the rehabilitation works can begin.

111. **Public consultations.** Extensive public consultations were carried out during the preparation of the ESMF and RPF in the main project areas. The local population expressed concerns and expectations that were summarized in the ESIA final report and the RPF. A social communication strategy will be prepared by the MINTP before works start, to provide ongoing information regarding the project and progress with road rehabilitation as well as provide information and guidance on raising concerns and lodging complaints regarding the project implementation as part of the Grievance Redress Mechanism prepared for the project.

112. **Citizen engagement.** The MINTP will carry out social M&E surveys, including gender specific surveys, before and after implementation of the road contract to gauge how road users' views on the performance of the MINTP and the contractors hired to carry out the civil works as well as their perception of the progress toward the PDO. The survey will use gender disaggregated data to measure and assess how the roads in particular are changing women's lives, particularly in reducing travel times, improved road safety and access to markets and enhancing social capital. The findings will serve as a tool to define road network social issues and recommendations for further improvements in the sector as well as progress in meeting the gender indicator. The MINTP will also, undertake community meetings chaired by the Prefect after the completion of the basic socio-economic infrastructures and selected road safety interventions to analyze community satisfaction and address any concerns. The MINTP will carry out gender-representative consultations in all beneficiary communities every six months, and several representatives from each affected community will be appointed as part of the consultation meetings to serve as community monitors. The MINTP will inform the beneficiaries of the status of rehabilitation works and other project-related activities, will provide monthly updates regarding the planned works in their communities, and will report any issues or problems associated with the implementation of these works on the ground. Both the surveys and the community meetings form the main framework for the social communication strategy that will be implemented and will be monitored during the life of the project.

113. **Safeguards institutional arrangements.** The responsibility for safeguard compliance is fully integrated into the overall implementation arrangements for the project with the MINTP/Cellule BAD-BM and CCAA having the main institutional responsibility. In particular, the MINTP will maintain the Environmental and Social Unit that was involved in the preparation and implementation of the previous transport projects. An institutional assessment of the Cellule BAD-BM carried out during project preparation revealed weaknesses in the staffing and overall management of social and environmental issues, including weak involvement of the Environmental and Social Unit in the day to day operation of the ministry. Consequently, it was

agreed to strengthen the Cellule BAD-BM with two full time specialists, an environmental specialist and a social development specialist. At least one of the specialists will have a strong background in managing resettlement and compensation. A senior environmental and a social expert will be hired by the CCAA to support UGP CCAA and the environmental and social aspects including safeguards, for the air transport component. The experts who will be recruited will work closely with the Environmental and Social Unit of MINTP, CCAA Ministry of Environment, Ministry of State Property and Land, civil society organizations, and contractors.

114. **Climate and disaster risk screening.** Adaptation to the adverse impacts of climate change is a priority for the GoC, as stated in the INDC submitted in 2015 to the United Nations Framework Convention on Climate Change. The proposed project is fully aligned with the objectives expressed there, having been designed to increase climate resilience for the sector and for the country. A climate and disaster risk screening was carried out for this project at the project concept stage using the Climate and Disaster Risks Screening Tool to identify early stage due diligence measures against potential climate and disaster risks. The risks identified at the onset helped guide the definition of climate and disaster considerations in the design of key components of the project, as well as to include the preparation of a study to serve as the basis for policy formulation in climate resilience. The study will equally establish an action plan to guide Cameroon in meeting its greenhouse gas emission mitigation commitment similarly expressed in the country’s Paris Conference on Climate Change (COP 21) as part of its INDC. The main components with climate change co-benefits, estimated costs and respective activities are listed in Table 8.

Table 8: Adaptation and Mitigation Co-benefits by Project Component

Sub-component	Activities	Bank Commitment by Sub-component	Adaptation Associated Sector	Mitigation Associated Sector
Subcomponent 1.5: Development of a climate resilience and adaptation strategy for land transport	Climate Study	US\$0.7 million	US\$0.35 million	US\$0.35 Million
Subcomponent 2.1: Rehabilitation and reconstruction of the Babadjou-Bamenda road section of the Yaoundé-Bamenda road corridor	Drainage structures / culverts added and / or improved, together with the construction of four new small bridges	US\$107.7 million	US\$12 million	0
Subcomponent 3.1: Airport safety and security strengthening	Construction of a CDOU at the Yaoundé, Garoua and Maroua international airports	US\$44.7 million	US\$3.8 million	0

115. **Greenhouse Gas (GHG) Emissions.** An analysis was undertaken to determine the impact of the proposed project on Carbon Dioxide (CO₂) emission levels of traffic¹⁹. As in the CBA, two development alternatives were compared for the road sections considered for rehabilitation under the project. In the without-project scenario, constant deterioration of the road and expected increases in traffic due to economic growth over the project period would increase CO₂ emissions, leading to a total of 1.95 million tons of CO₂ over the project lifetime. The decrease in road quality would lower driving speeds and lead to an increase of fuel consumption per vehicle-km, thus generating an overall increase in emissions. In the with-project scenario, rehabilitation of the road and expected increases in traffic due to economic growth, as well as low levels of induced traffic resulting from a decrease in travel costs due to road rehabilitation works, would lead to 1.90 million tons of CO₂ over the lifetime of the project. Compared to the without project scenario, rehabilitation works would result in higher driving speeds and lead to a decrease in fuel consumption per vehicle-km (closer to the optimal level of fuel efficiency use), thus generating a decrease in emissions relative to the baseline. The aggregate net project emissions along the considered sections over the lifetime of the project are therefore estimated to be -48.5 thousand tons of CO₂, or a 2.5 percent decrease compared to the baseline, as shown in Table 9. Considering the social cost of CO₂ emissions, at US\$30 per ton in 2015²⁰, the project leads to savings of US\$0.58 million due to the emission reduction over the considered lifetime. However, to be conservative, these benefits were not included in the economic analysis.

Table 9: Greenhouse Gas Emissions

	Baseline Scenario	Project Scenario	Net CO2 Emissions	Average net CO2 emissions per year
Unit	tCO ₂ over project lifetime	tCO ₂ over project lifetime	tCO ₂ over project lifetime	tCO ₂ per year
Total emissions	1,951,393	1,902,817	-48,576	-2,429

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

¹⁹ The CO₂ emissions evaluation was conducted using the HDM-4 model and was based on a methodology in line with the World Bank's 2015 Transport GHG Accounting Methodology.

²⁰ The carbon cost was based on the SDNCE/CCGCE Guidance Note on social value of carbon in project appraisal, July 14, 2014.

VII. RESULTS FRAMEWORK AND MONITORING

Country: Cameroon

Project Name: Cameroon Transport Sector Development Project (P150999)

Results Framework

Project Development Objectives												
PDO Statement The Project Development Objective is to: (a) strengthen transport planning; (b) improve transport efficiency and safety on the Babadjou-Bamenda section of the Yaoundé-Bamenda transport corridor; and (c) enhance safety and security at selected airports.												
These results are at				Project Level								
Project Development Objective Indicators												
Indicator Name	Definition	Core	Unit	Baseline	Cumulative/Annual Target Values					Frequency	Data Source/	Responsibility for
					YR1	YR2	YR3	YR4	End Target		Methodology	Data Collection
Transport Planning Improvement: Progress in applying Multimodal Transport Benchmarks (MTBs) to TPIP and DSCE 2	Transport sector strategic framework to support GOC's Second DSCE with multimodal Transport Benchmarks, to guide investment decisions and program monitoring. It includes an IITS supported by a transport planning model, data collection dispositions, and a rolling TPIP. The TPIP is a ten year rolling program composed of matured projects to be designed under the proposed project.	<input type="checkbox"/>	Text	MTBs inexistent	MTBs inexistent	MTBs defined in Multimodal Transport Master Plan (MTMP)	MTBs adopted in IITS	MTBs tested in Transport Planning Model (TPM)	MTBs mainstreamed in DSCE 2 and applied to the first PTIP	Annual	Project progress reports by implementing entities (PIUs) based on data from MTMP and TPM	PIUs

<p>Road transport efficiency improvement: Progress in improving physical road condition on the project road section between Babadjou and Bamenda</p>	<p>The International Roughness Index (IRI m/km) will be applied to measure progress in improving road surface conditions on the project roads that will be rehabilitated, 52 km in total. This includes the full reconstruction of the 35 km road section of National Road number 6 (RN6) between Babadjou (Western Region) and Bamenda (North-West Region), rehabilitation of 12 km of existing urban roads within Bamenda and construction of the 5.1 km Bamenda hill up station by-pass to connect Bafoussam with Bamenda through the eastern access road),. The indicator will be measured yearly and at works completion.</p>	<input type="checkbox"/>	<p>Text</p>	<p>>14</p>	<p>>14</p>	<p>>14</p>	<p><=5</p>	<p><=5</p>	<p><=5</p>	<p>Yearly & at works completion</p>	<p>Project progress report by implementing entities based on road condition surveys conducted by contract supervising engineer</p>	<p>PIU</p>
<p>Road transport efficiency improvement: Average time by a Twenty Foot Equivalent Unit (TEU) on the project road section between Babadjou and Bamenda</p>	<p>This indicators measures the benefits for TEUs from reconstruction of the 35 km road section of National Road number 6 (RN6) between Babadjou and Bamenda, including from improving accident spots on the section. The indicator measures the average travel time in minutes, excluding stops, taken by a Twenty Foot Equivalent Unit (truck) from the beginning to the end of the 35 km road section between Babadjou and the entrance into Bamenda at the place named Welcome to Bamenda). This indicator will be</p>	<input type="checkbox"/>	<p>Text</p>	<p>120</p>	<p>>= 120</p>	<p>>= 120</p>	<p>< 60</p>	<p>< 60</p>	<p><60</p>	<p>Yearly and at works completion</p>	<p>Project progress reports based on data collected by PIU</p>	<p>PIU</p>

	measured (in the morning or afternoon of the same day every year) by trailing loaded trucks of the same size. This vehicle type is the one retained in the Bank's core indicator											
Improve road asset management: km of road maintained under OPBC along the project road between Babadjou and Bamenda	Number of km of road maintained under the Output Performance-Based Contracting (OPBC) along the Yaoundé-Bamenda corridor including project road between Babadjou and Bamenda. This indicator will be measured yearly after the guarantee period of the Babadjou-Bamenda road section (estimated end 2019). The proposed OPBC will be prepared under this project but financed by the GoC using Road Funds budget.		Km	0	0	0	0	52	52	Yearly after the guarantee period of the Babadjou-Bamenda road section	Project progress reports based on data collected by PIU	PIU
Road safety improvement: Annual road accidents recorded along the project road between Babadjou and Bamenda	The project will finance the improvement of black spots on the 52 km inter-urban road section of the project. It will also finance, the purchase and use of traffic calming enforcing equipments. The indicator measures the number of vehicle accidents recorded by the National Gendarmerie along the	<input type="checkbox"/>	Number	56	<=56	<=56	<=40	<40	<40	Yearly	Project Progress reports based on accident data collected by the National Gendarmerie	PIU / National Gendarmerie

	inter-urban section of the Babadjou-Bamenda road.											
Airport safety Improvement: ICAO's EI rating of Aerodrome and Ground Assistance (AGA) at project airports	This indicator measures the final outcomes from all project interventions under the sub-component 3.1. ICAO's Effective Implementation (EI) Rating reflects – on a scale of 100 – progress in implementing corrective measures to address lapses identified by ICAO audits or monitoring missions with regard to safety at a country's main aerodromes and ground assistance. The project finances measures that allow achieving a 53% EI. The EI value will be determined by ICAO-monitored audit missions to be conducted in the first, third and fifth years of the project. Baseline data for the two ICAO indicators were derived from reports of an ICAO-audit monitored mission conducted in 2015.	<input type="checkbox"/>	Percentage (%)	36.20	36.20	36.20	>43	>43	>53	First, third and fifth years of the project	ICAO audit or monitoring reports conducted by project-financed external consultants	PIU/ ICAO

Air transport Security Improvement: ICAO's Average rating of Cameroon's air security oversight system	This indicator measures the final outcomes from all project interventions under the sub-component 3.2. ICAO's average rating of Cameroon's air security oversight system reflects – on a scale of 100 – of its compliance with international civil aviation security oversight requirements under Annex 17 of the Chicago Convention. It will be determined by ICAO-monitored audits to be conducted in the first, third and fifth years of the project. Baseline data for the two ICAO indicators were derived from reports of an ICAO-audit monitored mission conducted in 2015.	<input type="checkbox"/>	Percentage (%)	63	63	63	>65	>65	>70	First, third and fifth years of the project	ICAO audit or monitoring reports conducted by project-financed external consultants	PIU/ICAO
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Intermediate Results Indicators

Indicator Name	Definition	Core	Unit of Measure	Baseline	Cumulative/ Annual Target Values					Frequency	Data Source/	Responsibility for
					YR1	YR2	YR3	YR4	End Target		Methodology	Data Collection
Relevant government officials trained in transport planning	The project will train Government officials in the MINTP, MINT, MINEPAT, CARPA CCAA and the National Ports Authority in transport planning, with emphasis on concepts and practical management of multimodal transport planning, but also addressing the immediate needs		Number	0	0	0	50	100	150	Annual	Project progress reports by implementing entities	PIUs

	of the ministries responsible for the implementation of the IITS and the TPIP. This will include both the short term training to meet immediate needs, but also the training to be provided at the selected university.											
Transport Planning Improvement: Progress in adopting the first Transport Priority Investment Program (TPIP)	This indicators measures the progress made towards the elaboration of a Priority Transport Investment Program and its adoption for usage by the GoC.	<input type="checkbox"/>	Text	No TPIP	Consultant for data collection recruited	Data collection completed	Transport planning model Tested	TPIP's design studies completed	Consultations on and adoption / use of first TPIP completed	Annual	Project progress reports by implementing entities	PIUs
Road Transport efficiency improvement: Roads rehabilitated	This indicator measures the project financing of full reconstruction of the 35 km road section of National Road number 6 (RN6) between Babadjou (Western Region) and Bamenda (North-West Region), rehabilitation of 12 km of existing urban roads within Bamenda and construction of the 5.1 km Bamenda hill up station by-pass to connect Bafoussam with Bamenda through the eastern access road). This measure will be recorded in December of each year and at works completion.	X <input type="checkbox"/>	km	0	10	35	52	52	52	Yearly and at works completion.	Project progress report by MINTP implementing entity	PIU
Road safety improvement: Accident black spots removed on the project road section between Babadjou and Bamenda	As part of reconstructing the 35 km project road section between Babadjou and Bamenda, the project will correct dangerous curves which currently account for over 80% of accidents along	<input type="checkbox"/>	Number	0	3	6	17	17	17	Yearly and at works completion.	Project progress report by MINTP implementing entity	PIU

	the Babadjou-Bamenda road section. This measure will be recorded in December of each year and at works completion.											
Road Transport efficiency improvement: Secondary roads reconstructed	The project will finance civil works, equipment and consultant services related to the provision of infrastructure, to enhance access to agricultural production and touristic zones and provide basic social services along the Babadjou-Bamenda road section. The indicator measures the number of rehabilitated kilometers of existing secondary road links to production and touristic sites in the project area. This measure will be recorded in December of each year and at works completion. Multi criteria will be adopted to guide the choice of each road, the level of service and the type of works to be carried out on it. These criteria will include, but not limited to traffic and economic data, environmental and social constraints.	<input type="checkbox"/>	km	0	0	15	30	50	50	Yearly	Project progress report by MINTP implementing entity	PIU
Road Transport efficiency improvement: Market sheds built for road side vendors on the project road section between Babadjou and Bamenda	Number of market sheds built to harbor road side vendors on the project road section between Babadjou and Bamenda. Each shed will include storage, toilets and vending counters. This measure will be recorded in December of each year and at works completion. The choice of	<input type="checkbox"/>	Number	0	0	5	15	25	25	Yearly and at works completion.	Project progress report by MINTP implementing entity	PIU

	markets will be based on written demand by beneficiary groups or local councils. Multi criteria will be adopted to guide the choice of each market, including written commitment of group or council to ensure maintenance and to move vendors from road sides to the new sheds. Choice of market locations will be guided by environmental and social impact criteria to be adopted consultatively with local councils.											
Social infrastructure improvement: Number of existing water systems rehabilitated or extended	Existing rural water systems in the project area includes water catchment points, a water tank, distribution piping and public water taps. The project will identify from existing water systems those requiring rehabilitation or extensions. Eligibility criteria will include: minimal or no impact on environment, written request from community or council; the existence of a community management mechanism; commitment by council and community to ensure maintenance of the system. This measure will be recorded in December of each year and at works completion.	<input type="checkbox"/>	Number	0	0	5	10	10	10	Yearly and at works completion.	Project progress report by implementing entities	PIU/MINTP

<p>Airport safety improvement: Project-implemented AGA Corrective measures validated by ICAO-monitored missions</p>	<p>This indicator is derived from the project interventions under the sub-component 3.1 It measures the number of safety measures validated by ICAO-monitored audits or missions, expressed as a percentage of measures contained in the corrective action plan for aerodromes and ground assistance. It will be determined by ICAO-monitored audits to be conducted in the third and fifth years of the project. Baseline data for the two ICAO indicators were derived from reports of an ICAO-audit monitored mission conducted in 2015.</p>		<p>Percentage (%)</p>	<p>0</p>	<p>2.5</p>	<p>5</p>	<p>10</p>	<p>15</p>	<p>15</p>	<p>Third and fifth years of the project</p>	<p>ICAO audit or monitoring reports conducted by project-financed external consultants</p>	<p>PIU/ICAO</p>
<p>Air transport security Improvement: Annex 17 project-implemented corrective measures validated by ICAO-monitored missions</p>	<p>This indicator is derived from the project interventions under the sub-component 3.1 Number of oversight measures validated by ICAO-monitored audits or missions, expressed as a percentage of measures contained in the corrective action plan for compliance with ICAO's Critical Elements (CEs). It will be determined by ICAO-monitored audits to be conducted in the third and fifth years of the project. Baseline data for the two ICAO indicators were derived from reports of an ICAO-audit monitored mission conducted in 2015.</p>		<p>Percentage (%)</p>	<p>0</p>	<p>2.5</p>	<p>5</p>	<p>10</p>	<p>15</p>	<p>15</p>	<p>Third and fifth years of the project</p>	<p>ICAO audit or monitoring reports conducted by project-financed external consultants</p>	<p>PIU/ICAO</p>

Citizen engagement consultations carried out on a bi-annual basis with participation from project beneficiaries	Number citizen engagement consultations carried out during project implementation involving direct project beneficiaries.	<input type="checkbox"/>	Number	00	2	4	6	8	10	Bi-annual	Project progress report by MINTP implementing entity	PIU
Airport users	Direct project beneficiaries of airport improvements, measured by the number of passengers departing from and arriving at the project airports.		Number	0	0	0	1,600,000	1,626,000	1,651,000	Yearly from third year of project	Project progress report by implementing entities	PIU
Direct project beneficiaries	Direct beneficiaries are people or groups who directly derive benefits from an intervention. It includes: (i) Population of the communities along the Babadjou-Bamenda road section; and (ii) Population of the city of Bamenda.	X	Number	0	0	0	800,000	824,000	848,000	Yearly from third year of project	Project progress report by implementing entities	PIU
Female beneficiaries	Based on the assessment and definition of direct project beneficiaries and expressed as a percentage of direct beneficiaries.	X	Percentage (%)	0	0	0	52	52	52	Yearly from third year of project	Project progress report by implementing entities	PIU

Progress made by CCAA towards certifying at least one of the identified airports in conformity with ICAO SARPs	This indicator is pre-determined by the certification of one of the project's airports by CCAA with an ICAO audit note of at least 70%.		Text	First successful evaluation of the certification process by ICAO		Second successful evaluation of the certification process by ICAO			Third successful evaluation of the certification process by ICAO	One airport certified	ICAO audit results of CCAA certification process	PIU
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VIII. MAP

