

AFRICAN DEVELOPMENT BANK



Language : English
Original : French

ROAD PROGRAMME - PHASE II (RP2)

COUNTRY: GABON

PROGRAMME APPRAISAL REPORT

Dated: 21 July 2011 (This report was written following a Programme Appraisal Report update mission to Gabon from 28 June to 10 July 2011)

Appraisal Team	<p>Team Leader: P. RUGUMIRE, Principal Transport Engineer, OITC.1, Ext.3803</p> <p>Team Members: M. BENARD, Principal Transport Economist, OITC.1, Ext. 2302 J.P. KALALA, Principal Socio-economist, OITC.1, Ext. 3561 J.F.EDJODJOM'ONDO, Infrastructure Expert, GAFO, Ext. 6605 Environmentalist (Consultant), OITC.1</p> <p>Regional Director: M. KANGA, ORCE</p> <p>Sector Director: G. MBESHERUBUSA, OITC</p> <p>Sector Division Manager: A. OUMAROU, Acting Division Manager, OITC.1</p>
Peer Review	<p>L. EHOUMAN Transport Economist, OITC.1, Ext. 6138</p> <p>P. HORUGAVYE Socio-economist, OWAS.1, Ext. 2543</p> <p>M. SQUARE Chief Transport Engineer, OITC.1, Ext. 6553</p> <p>M. GUEDEGBE Chief Education Analyst, OSHD.2, Ext. 2405</p> <p>P. MORE NDONG Principal Transport Engineer, OITC.2, Ext. 2284</p>

Table of Contents

PROGRAMME INFORMATION SHEET, CURRENCY EQUIVALENTS, ACRONYMS AND ABBREVIATIONS, LIST OF ANNEXES AND TABLES, BASIC DATA, PROGRAMME LOGICAL FRAMEWORK, IMPLEMENTATION SCHEDULE, EXECUTIVE SUMMARYi to ix

I – STRATEGIC THRUST AND RATIONALE	1
1.1 Programme Linkages with Country Strategy and Objectives	1
1.2 Rationale for Bank’s Involvement	2
1.3 Aid Coordination.....	2
II – PROGRAMME DESCRIPTION	3
2.1 Programme Components	3
2.2 Technical Solutions Adopted and Alternatives Explored	4
2.3 Programme Type	5
2.4 Estimated Programme Cost and Financing Arrangements.....	5
2.5 Programme Target Area and Beneficiaries	7
2.6 Participatory Approach for Programme Identification, Design and Implementation .	8
2.7 Bank Group Experience and Lessons Reflected in Programme Design	9
2.8 Key Performance Indicators	10
III – PROGRAMME FEASIBILITY	10
3.1 Economic and Financial Performance.....	10
3.2 Environmental and Social Impact	11
IV – PROGRAMME IMPLEMENTATION	14
4.1 Implementation Arrangements	14
4.2 Programme Monitoring and Evaluation	17
4.3 Governance.....	17
4.4 Sustainability	18
4.5 Risk Management.....	19
4.6 Knowledge Building	20
V – LEGAL FRAMEWORK	20
5.1 Legal Instrument	20
5.2 Conditions Associated with Bank’s Involvement	20
5.3 Compliance With Bank Policies	21
VI- RECOMMENDATION	21

APPENDIX I - GABON: COMPARATIVE SOCIO-ECONOMIC INDICATORS

APPENDIX II - ADB GROUP PORTFOLIO IN GABON

APPENDIX III - MAJOR RELATED ONGOING PROJECTS IN GABON

APPENDIX IV - MAP OF PROGRAMME AREA

LIST OF TECHNICAL ANNEXES

<u>No.</u>	<u>TITLE</u>
1.	Detailed Programme Costs and Expenditure Schedule
2.	Rationale for the Amount of RP2 Counterpart Contribution
3.	Procurement of Goods, Works and Services
4.	Economic and Financial Analysis

LIST OF TABLES

<u>No.</u>	<u>TITLE</u>
2.1	Summary of Programme Components
2.2	Pavement Systems Adopted for the Port Gentil-Mandorové Road
2.3	Alternative Solutions Explored and Reasons for Rejection
2.4	Summary of Estimated Programme Cost by Component
2.5	Summary of Programme Cost by Expenditure Category
2.6	Programme Sources of Financing by Expenditure Category
2.7	Expenditure Schedule by Expenditure Category
2.8	Expenditure Schedule by Source of Financing
3.1	Summary of Economic Analysis
4.1	Provisional Supervision Programme

Currency Equivalents*July 2011*

UA 1	=	CFAF 726.374
UA 1	=	EUR 1.10735
UA 1	=	USD 1.60045

Fiscal Year

1 January - 31 December

Weights and Measures

1 metric tonne	=	2 204 pounds
1 kilogramme (kg)	=	2.200 pounds
1 metre (m)	=	3.281 feet
1 millimetre (mm)	=	0.03937 inch
1 kilometre (km)	=	0.621 mile
1 hectare (ha)	=	2.471 acres

Acronyms and Abbreviations

AFD	:	French Development Agency
AADT	:	Annual Average Daily Traffic
ABEDA	:	Arab Bank for Economic Development in Africa
ADB	:	African Development Bank
BC	:	Bituminous concrete
BEAC	:	Bank of Central African States
MTS	:	Bank's Medium-Term Strategy 2008-2012
CEMAC	:	Central African Economic and Monetary Community
CNI	:	<i>Compagnie de Navigation Intérieure (CNI)</i>
CRD	:	Computerized Road Database
DGEI	:	General Directorate of Infrastructure Studies
DGERA	:	General Directorate of Road and Aerodrome Maintenance
DGIT	:	General Directorate of Transport Infrastructure
DGMM	:	General Directorate of Merchant Shipping
DGS	:	General Directorate of Statistics
ECCAS	:	Economic Community of Central African States
EDF	:	European Development Fund
HTTD	:	Net of Tax and Customs Duty
ESIA	:	Environmental and Social Impact Assessment
EU	:	European Union
FER2	:	Second Generation Road Maintenance Fund
GAFO	:	Gabon Regional Office
GDP	:	Gross Domestic Product
GPRSP	:	Growth and Poverty Reduction Strategy Paper
HDM	:	High Design Maintenance Model
ICB	:	International Competitive Bidding
IEC	:	Information, Education and Communication
EIRR	:	Economic Internal Rate of Return
IsDB	:	Islamic Development Bank
LCSM	:	Least Cost Selection Method
LDV	:	Light Duty Vehicle
MECIT	:	Ministry of the Economy, Trade, Industry and Tourism
MEIAT	:	Ministry of Equipment, Infrastructure and Physical Planning
STM	:	Single Tender Selection Method
LCB	:	Local Competitive Bidding
NEPAD	:	New Partnership for Africa's Development
NER	:	Net Enrolment Ratio
NPV	:	Net Present Value
OPRAG	:	Gabon Ports and Roadstead Authority
PAPSUT	:	Urban and Transport Sector Planning Adjustment Programme
PARR	:	Road Network Development Programme
PDIT	:	Intermodal Transport Master Plan (1998-2012)
PDIA	:	Programme Direct Impact Area
PIP	:	Public Investment Programme
QCBS	:	Quality- and Cost-Based Selection

RBCSP	:	Results-Based Country Strategy Paper
RCP	:	Resettlement and Compensation Plan
RWL	:	Road Wear Levy
SIGEPRAG	:	Gabon Ports and Roadstead Investment and Management Company
SOGATRA	:	Gabon Urban Transport Company
SONATRAM	:	National Maritime Transport Company
STI	:	Sexually Transmitted Infection
TFP	:	Technical and Financial Partner
UA	:	Unit of Account
UAM	:	Million Unit of Account
Veh/d	:	Vehicles per day
WB	:	World Bank

Programme Information Sheet

Client Information

BORROWER:	REPUBLIC OF GABON
PROJECT NAME:	ROAD PROGRAMME– PHASE II (RP2)
LOCATION:	NGOUNIE, NYANGA AND OGOOUE MARITIME PROVINCES
EXECUTING AGENCY:	MINISTRY OF EQUIPMENT, INFRASTRUCTURE AND PHYSICAL PLANNING (MEIAT)

Financing Plan

Source of Financing	Amount (in UA Million)	Instrument
ADB	230.00	Loan
Gabonese Government	36.45	Counterpart Contribution
Total Cost	266.45	

ADB Loan Key Financing Information

Loan Currency:	Euros (EUR)
Interest Type:	Floating
Interest Rate:	Base Rate (EURIBOR 6 months) + margin on Bank cost of borrowing + contractual spread (60 bp)
Commitment Charge:	Not applicable
Other Charges:	Not applicable
Repayment:	Half-yearly
Tenor:	20 years
Grace Period:	60 months
NPV (baseline scenario):	CFAF 133.26 billion
EIRR (baseline scenario):	26.45%

Duration – Main Milestones (expected)

Concept Note Approval:	September 2010
Project Approval:	September 2011
Signature:	November 2011
Effectiveness:	March 2012
Completion:	March 2016
Last Disbursement:	December 2016
First Reimbursement:	January 2017

EXECUTIVE SUMMARY

1. Programme Overview

1.1 Road Programme (RP2) Phase 2 is a follow-up to Road Programme Phase 1 (RP1), whose loan was approved by the Bank in 2007. To date, all road construction and design contracts under RP1 have been awarded and are being executed. RP2 design is built on RP1 achievements (road design and lessons from its implementation) and its implementation will help to ensure the continuous flow of traffic on the road sections that are being tarred under RP1.

1.2 RP2 is in line with the orientations of the “Emerging Gabon” Strategic Plan Concept Note for the 2011-2016 period, in particular its second priority thrust “*Strengthening the Key Factors of Overall Competitiveness*” expressed in the sixth strategic objective “to modernize infrastructure and ensure harmonious regional development”. As with RP1, RP2 will contribute to efforts to enhance regional integration as defined in the Central African Consensual Transport Master Plan (PDCT-AC) adopted in December 2003. RP2 comprises three main roads. The first is the Mouila-Ndendé road (70 km), which is part of the regional highway linking Cameroon to Congo and a link in the Tripoli-Windhoek Trans-African Corridor. The second is the Ndendé-Tchibanga road (85 km) linking this regional highway to the future deep-sea port at Mayumba. In fact, in July 2010, the Government initiated construction and tarring work on the 109 km-long Tchibanga-Mayumba road section as well as the construction of the 524 metre-long bridge over the Banio with its own funds. The third road under the programme, that is Port Gentil-Mandorové (34 km), lies on the Port Gentil-Lambaréné-Ndjolé multimodal road. The construction of the land section of the Port Gentil-Lambaréné-Ndjolé multimodal road will help to open up the country’s second largest town. Technical, social, environmental and economic studies on the Mouila-Ndendé and Ndendé-Tchibanga roads were carried out in 2010 under RP1. Those on the Port Gentil-Mandorové section were undertaken in 2009 with the Gabonese Government’s own funds.

1.3 RP2 also includes the following related facilities: (i) construction of a bus terminal and a weighing station at Mbada; (ii) construction of two footbridges; (iii) rehabilitation of social infrastructure; (iv) rehabilitation and construction of five (5) river docks at Mandorové, Omboué, Ngoumba, Achouka and Ndjolé; and (v) supply and installation of buoys on the Ogooué. RP2 also includes a “study” component and an ‘institutional support and programme management’ component. The overall cost of the second phase of the Road Programme, net of taxes and customs duty, including provision for physical contingencies and price escalation, is estimated at CFAF 193.54 billion (UA 266.45 million). The provision for physical contingencies represents 10% of the base cost while the provision for price escalation represents 7.29% of the sum of the base cost and the provision for physical contingencies. The EUR 254.69 million, or UA 230.00 million, ADB loan will cover 86.32% of the overall programme cost, net of taxes and customs duties, while the Gabonese Government’s contribution will cover 13.68% of the cost (i.e. UA 36.45 million). The Government’s contribution will cover the full amount of compensation to be paid to people affected by the programme.

1.4 The programme is expected to contribute to opening up production zones within the country and boosting regional trade. Specifically, it will help to improve the movement of goods and people on the Libreville-Tchibanga road and on the road/river

link between Port Gentil, Lambaréné and Ndjolé. It will also contribute to improving access by the population in the programme direct impact area (PDIA) to socio-economic infrastructure.

2. Needs Assessment

The programme roads are part of Gabon's six strategic roads linking various provincial headquarters. They also link up to the road networks of neighbouring countries. RP2 implementation plugs into Pillar 2 "Strengthening Infrastructure to Support Non-oil Growth Poles" included in the Bank's intervention strategy for Gabon (CSP 2011-2015). The Bank's involvement is a response to Government's request for assistance in implementing the Road Network Development Programme (PARR). It meets a critical need to open up production zones and will contribute to enhancing the competitiveness and diversification of the economy, and alleviating poverty through the improvement of the living conditions of the local population.

3. Value Added for the Bank

This programme is in line with the Bank's medium- and long-term strategy, which focuses on infrastructure and the Bank's leading role in implementing NEPAD programmes in the area of infrastructure and regional integration. The Bank's participation in financing the Road Network Development Programme (PARR) 2002-2012, the road sub-sector reference framework, is being realized under a road programme of which the on-going first phase (RP1) concerns the following three road sections: Fougamou-Mouila, La Léyou-Lastoursville and Ndendé-Lébamba, totalling 245.6 km. The second phase of the programme is a follow-up to RP1 and is consistent with Government priorities. The implementation of RP2 is a continuation of efforts to strengthen the structuring national road network, open up the interior and develop regions with great economic and tourism potential. By building the Mouila-Tchibanga and Port Gentil-Mandorové road sections as well as river docks on the Ogooué, RP2 will help to modernize the country's transport infrastructure.

4. Knowledge Management

4.1 The establishment of a benchmark for key impact indicators before programme start-up and impact assessment at the end of the programme will help to produce useful information about the programme outputs and impacts. This knowledge will be included in the computerized road database (CRD) of the Ministry of Equipment, Infrastructure and Physical Planning (MEIAT), posted on the Bank's website, and published in its annual and completion reports, and post-evaluation review. It will also serve as indicators for finalizing the "Gabon Emergent" strategic plan.

4.2 The achievements of similar and on-going road projects, notably those of RP1, were used in designing RP2. The technical expertise acquired by the General Directorate of Infrastructure Studies (particularly concerning procurement procedures

and project management) in past and on-going road projects financed by the ADB and other donors will be used in implementing this programme. The programme monitoring and evaluation mechanism will also help to strengthen knowledge that will prove useful in designing future projects and/or programmes.

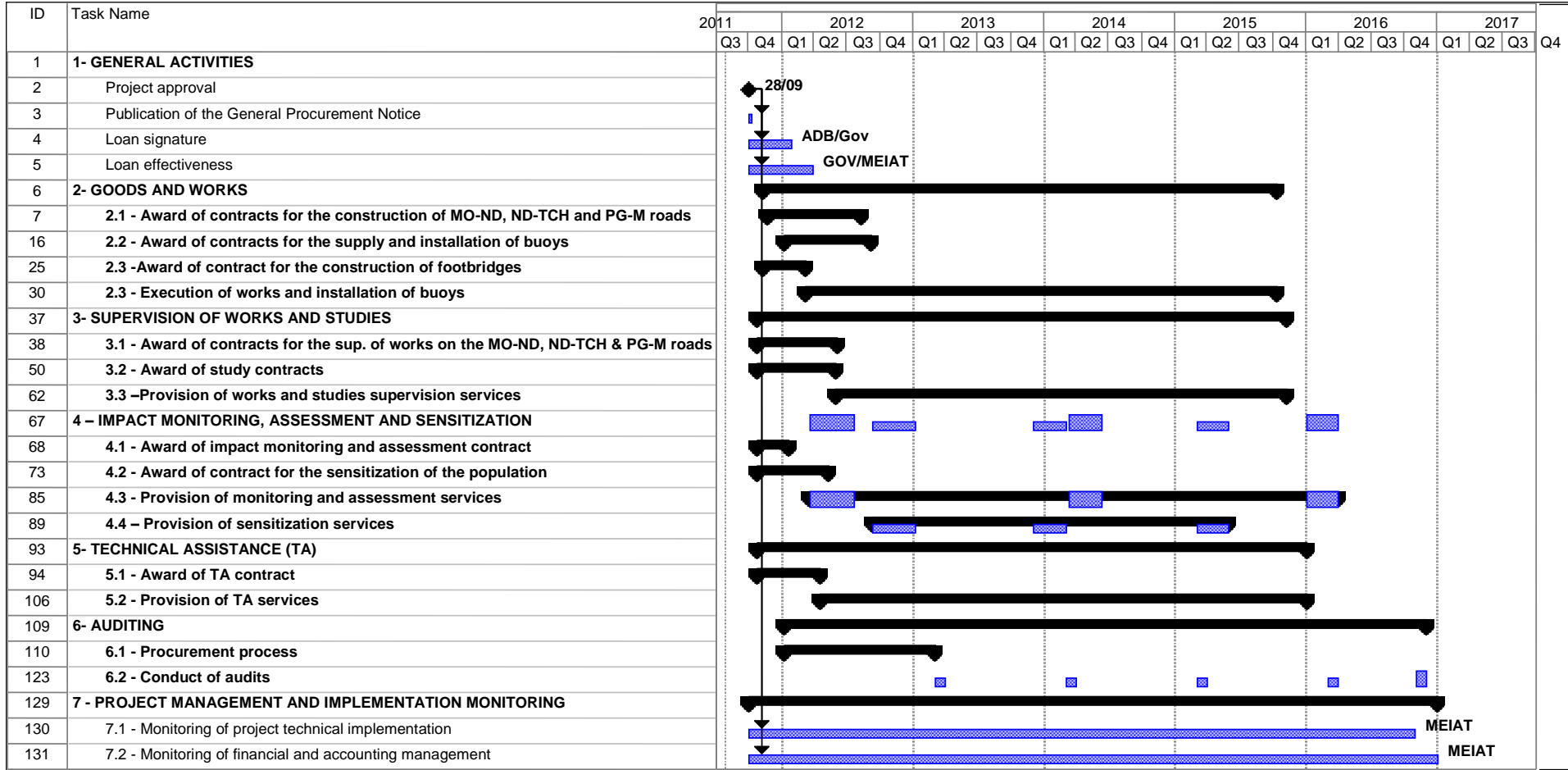
GABON: ROAD PROGRAMME – PHASE II (RP2): RESULTS-BASED LOGICAL FRAMEWORK

Project goal: Contribute to opening up production zones within the country and boosting regional trade

	OUTPUTS CHAIN	PERFORMANCE INDICATORS			MEANS OF VERIFICATION	RISKS/MITIGATIVE MEASURES
		INDICATOR (including ISC)	BASELINE CASE	TARGET		
IMPACT	Improved land and river transport systems and increased regional trade.	(a) Volume of trade between ECCAS Member States.	(a) USD 318 million in 2010.	(a) USD 382 million in 2020.	Statistical reports by MEIAT, MECIT, DGS, and ECCAS.	<p><u>Risks:</u> Inadequate resources to finance PARR;</p> <p><u>Mitigative Measures:</u> (i) Government and TFP commitment to mobilize the resources needed to implement PARR; (ii) pursuance of the regional integration policy.</p>
		(b) Ratio of the paved road network in good condition.	(b) 15% in 2010.	(b) 30% in 2010.		
OUTCOMES	Improved movement of goods and people on the Libreville-Tchibanga (LBV-TCH) road; improved transportation of goods and people on the Port Gentil-Mandorové (PG-MRV) road as well as navigation safety on River Ogooué between Mandorové and Lambaréné.	(i) Average traffic speed; (ii) Vehicle operating cost (VOC) for a LDV; (iii) Travel time; (iv) Number of accidents (grounding) on River Ogooué.	(i) 20 km/h in 2010; (ii) CFAF 422/km in 2010; (iii) 13h in 2010; (iv) 11h in 2010;	(i) 70km/h in 2016; (ii) CFAF 262/km in 2016; (iii) 8h in 2016; (iv) 6 in 2016;	<p><u>Sources:</u> MEIAT, FER2, DGS, project impact monitoring and evaluation reports, reports of the Ministries of the Economy, Transport, etc.</p> <p><u>Methods:</u> Statistics and surveys.</p>	<p><u>Risks:</u></p> <p>(a) Insufficient resources in FER2; (b) Overloading of timber lorries.</p> <p><u>Mitigative Measures:</u></p> <p>(a) Government's compliance with its commitment to provide resources to FER2; (b) (i) Government's commitment to apply the law on the protection of the road heritage; (ii) setting up of weighing stations; and (iii) sensitization campaigns to enhance the adherence of haulers.</p>
	Improved socio-economic well-being of the population in the PDIA.	(v) Rural access index; (vi) Average income per person.	(v) 20% in 2010; (vi) CFAF 602 000/yr at Port Gentil and CFAF 528 000/yr at Mouilla and Ndendé in 2010.	(v) 30% in 2016; (vi) CFAF 722 000/yr at Port Gentil and CFAF 634 000/yr at Mouilla and Ndendé in 2016.		

OUTPUTS CHAIN		PERFORMANCE INDICATORS			MEANS OF VERIFICATION	RISKS/MITIGATIVE MEASURES
		INDICATOR (including ISC)	BASELINE CASE	TARGET		
OUTPUTS	1. (i) Mouila-Ndendé, Ndendé-Tchibanga, and PG-MRV road sections are tarred; (ii) supervision of construction is assured; (iii) the population of PDIA is sensitized on STIs, environmental protection, road and inland navigation safety; (iv) related rural roads; (v) socio-economic infrastructure are developed or rehabilitated; (vi) footbridges are built; (vii) weighing station is constructed and equipped; and (viii) agricultural implements are provided to women's groups.	1. (i) Km of tarred roads; (ii) monitoring reports produced; (iii) people sensitized on HIV/AIDS, environmental protection, road safety and inland navigation safety; (iv) km of related rural roads constructed; (v) 1m of fences built around schools and health centres; (vi) footbridges built; (vii) functional weighing station and bus station; (viii) batches of small transport and agricultural produce distributed to women's groups; and (ix) number of jobs created.	1. In 2011: (i) 0 km of road tarred; (ii) 0 report; (iii) 0 person sensitized; (iv) 0 km of related rural roads built; (v) 0 1m of fences built; (vi) 0 footbridge; (vii) 0 weighing station and bus station; (viii) 0 batch of small equipment; and (ix) 0 jobs created; 2. In 2011: (i) 0 river dock constructed; and (ii) 0 floating or fixed buoy installed. 3. In 2011: 0 study report prepared. 4. In 2011: (i) 0 long-term expert posted to MEIAT; (ii) 0 monitoring and evaluation report prepared; (iii) 0 audit report prepared; and (iv) 0 quarterly project implementation report prepared.	1. In 2016: (i) 189 km of roads are tarred; (ii) 87 reports; (iii) 5 000 people, 55% of them women, are sensitized; (iv) 74 km of related rural roads are built; (v) 1 120 1m of fences are built; (vi) 2 footbridges are built; (vii) 1 weighing station and 1 bus station are constructed; (viii) 30 batches of small equipment are distributed; and (ix) 600 jobs are created. 2. In 2016: (i) 5 river docks are constructed; (ii) 120 floating and fixed buoys are installed. 3. In 2016: three study reports are prepared. 4. (i) 2 long-term experts are posted to MEIAT; (ii) 1 report on the baseline case is available in 2012, 1 interim report in 2014 and 1 impact report in 2016; (iii) 0 audit report for 2012, 2013, 2014, 2015 and 2016; and (iv) 20 quarterly project implementation reports are prepared.	<u>Sources:</u> monitoring mission reports, MEIAT quarterly and annual reports, DGS reports, Bank supervision, mid-term review and completion reports.	<u>Risks:</u> 1. Long delays in ratifying loan agreements; 2. Inadequate technical staff at MEIAT; 3. Increased construction cost; 4. Delay in mobilizing the counterpart contribution; <u>Mitigative Measures:</u> 1. The Government undertakes to accelerate the ratification process; 2. Provision of technical assistance to MEIAT; 3. Reduction in the time between studies and works, realistic cost valuation and provision for contingencies; 4. Counterpart contribution budgeted and deposited in an account opened for that purpose.
	2. (i) River docks are built; and (ii) fixed and floating buoys are installed;					
	3. Conduct of feasibility studies on: (i) the construction of the Lambaréné river port; (ii) the restructuring of the road sector; and (iii) the cost of road construction in Gabon.	2. (i) River docks built, and (ii) floating and fixed buoys installed.				
	4. (i) The institutional capacity of MEIAT is strengthened; (ii) a functional monitoring and evaluation system is established; (iii) audits are carried out; and (iv) the project is managed.	3. Study reports prepared and validated. 4. (i) Long-term experts posted to MEIAT; (ii) monitoring and evaluation reports prepared; (iii) audit reports prepared; and (iv) quarterly project implementation reports prepared.				
KEY ACTIVITIES	COMPONENTS				RESOURCES	
	A. Construction of Roads and Related Infrastructure; B. Improvement of River Navigation; C. Studies; D. Institutional Support and Programme Management.				A. UA 250.92 million; B. UA 7.10 million; C. UA 2.28 million; D. UA 6.15 million.	

GABON: RP2 - Programme Implementation Schedule



REPORT AND RECOMMENDATION OF MANAGEMENT TO THE BOARD OF DIRECTORS CONCERNING THE PROPOSAL TO GRANT A LOAN TO GABON FOR THE SECOND PHASE OF THE ROAD PROGRAMME (RP2)

Management hereby submits this report and recommendation concerning the proposal to grant a EUR 254.69 million (UA 230.00 million) loan to Gabon to finance the Second Phase of the Road Programme (RP2).

I. STRATEGIC THRUST AND RATIONALE

1.1 PROGRAMME LINKAGES WITH COUNTRY STRATEGY AND OBJECTIVES

1.1.1 In April 2006, the Government adopted its Growth and Poverty Reduction Strategy Paper (GPRSP) for the 2006-2008 period, whose second pillar was the improvement of transport infrastructure, particularly regional integration highways. At the end of the GPRSP 2006-2008 period and following a constitutional transition period, the Government is finalizing a Strategic Plan called “Gabon Emergent” to replace the GPRSP for the 2011-2016 period. The plan seeks to create conditions for accelerated and diversified growth, sustained and effective improvement of the living conditions of the population. According to the Gabonese President’s Position Letter of April 2010, this new plan will focus on three priority thrusts: (i) sustained and diversified strong growth; (ii) strengthening of key factors of overall competitiveness; and (iii) sharing of the fruits of growth. These three priority areas are divided into nine strategic objectives, the sixth of which is to “modernize infrastructure and ensure harmonious regional development”.

1.1.2 The major orientations of Gabon’s current transport sector policy, which was adopted by the Government in April 1998, are contained in a document titled “Transport Policy Letter”, reflecting the context of economic recession of the time. The sector policy initially served as a basis for preparing the Intermodal Transport Master Plan (PDIT) 1998-2015, which focused mainly on the definition of the sector’s priorities and subsequent actions, and then on the formulation and launching of the Road Network Development Programme (PARR) 2002-2012 that serves as the reference framework for donor operations in the road sub-sector. The PARR aims to: (i) open up the country from within to eliminate one of the major obstacles to the enhancement of the growth potential of production zones and rural areas; and (ii) open up Gabon to neighbouring countries to foster sub-regional integration and boost trade. In addition, following the review of PDIT implementation in 2005, the Government adopted a River and Maritime Transport Rehabilitation and Revival Plan to: (i) modernize Gabonese ports to meet national economic needs; (ii) improve the navigability of River Ogooué; and (iii) improve transport quality and safety.

1.1.3 The Bank’s participation in financing PARR is through a road programme, the first phase (RP1) of which was approved in September 2007. Planned operations under the second phase of the road programme (RP2) are included in the Road Network Development Programme and the River and Maritime Transport Rehabilitation and Revival Plan. RP2 will contribute to opening up the country from within by linking various provincial headquarters by a road or an all-season intermodal road-river link. RP2 implementation is a Government priority and it is in keeping with the second priority thrust of the “Gabon Emergent” Strategic Plan.

1.1.4 Furthermore, the programme design took into consideration the orientations of the Central African Consensual Transport Master Plan (PDCT-AC) adopted in December 2003 under the aegis of the Economic Community of Central African States (ECCAS), which attaches special importance to regional infrastructure and seeks, in the short term, to enable traffic on a paved road from one capital to another within ECCAS.

1.2 RATIONALE FOR BANK'S INVOLVEMENT

1.2.1 On 12 September 2007, the Bank approved a UA 221.09 million loan to finance RP1, which mainly comprises: (i) the development and tarring of the Fougamou-Mouila (112.4 km), La Léyou-Lastoursville (96 km) and Ndendé-Lebamba (37 km) roads; and (ii) the conduct of studies on the Mouila-Ndendé-Doussala, Ndendé-Tchibanga, RN1 (PK0-PK12) roads, and the Libreville Expressway. To date, all road construction and design contracts under RP1 have been awarded and are being executed. RP2 implementation will help to ensure the continuous flow of traffic on the road sections being tarred under RP1. In addition, roads under RP2 will contribute to enhancing the economic weight of Port Gentil, Mouila, Ndendé and Tchibanga.

1.2.2 RP2 is a continuation of efforts to strengthen the national structuring road network, open up the country from within and develop regions with great economic and tourism potential. The programme will contribute to enhancing the competitiveness and diversification of the economy, and alleviating poverty by improving the living conditions of local communities. Thus, RP2 implementation plugs into Pillar 2 “Strengthening Infrastructure to Support Non-oil Growth Poles” included in the Bank’s intervention strategy for Gabon (CSP 2011-2015).

1.2.3 The construction of the Mouila-Doussala (Congo border) road section under RP2 will contribute to strengthening regional integration. In fact, this road section is an important link of the Ndjamena-Yaoundé-Brazzaville corridor, which is part of the Tripoli-Windhoek Trans-African highway. The objective of the corridor, which is included in NEPAD’s Short Term Action Plan (STAP), is to link Yaoundé, Libreville and Brazzaville. Sections of the road between Mbalmayo in Cameroon and Lambaréné in Gabon have already been built. The Lambaréné-Fougamou and Fougamou-Mouila sections are being constructed with financing from the Spanish Government and the Bank. Through RP2, the Gabonese Government intends to pursue road construction work up to Ndendé. Hence, RP2 is consistent with the Bank’s Medium-Term Strategy (MTS 2008-2012), which focuses on infrastructure and reaffirms the Bank’s leading role in STAP implementation in the areas of infrastructure and regional integration.

1.3 AID COORDINATION

1.3.1 There has been progress in coordination in terms of information sharing and harmonization of the programming cycles of operations of technical and financial partners (TFP) based on the “Gabon Emergent” Strategic Plan. In May 2010, the Prime Minister signed an order to lay down the framework for foreign aid coordination, harmonization and monitoring. A Joint Government/TFP Committee chaired by the Prime Minister has been established. Six thematic groups covering all sectors of TFP intervention are operational and provide a conducive framework for consultation. A Thematic Group Coordination Unit has also been established and attached to the Prime Minister’s Office. In the transport sector, the Bank, through its Regional Office, participates actively in these consultations, notably as co-leader of the infrastructure thematic group. As part of coordination, appraisal report preparation and update missions held meetings with the key TFPs represented in Libreville (the World Bank, the French Development Agency and the European Union) and an Islamic Development Bank (IsDB) mission. These meetings helped to share relevant information to ensure greater consistency and complementarity of various operations in the transport sector, particularly the road sub-sector.

1.3.2 During the implementation of this programme, coordination will be pursued, particularly: (i) through the participation of GAFO in meetings of the Thematic Group of TFPs

involved in the transport sector; (ii) during various supervision missions; and (iii) through the involvement of stakeholders in validating various study reports.

II. PROGRAMME DESCRIPTION

2.1 Programme Components

Programme Objectives

2.1.1 The programme's sector objective is to contribute to opening up production zones within the country and boosting regional trade. The programme's specific objectives are to: (i) improve the movement of goods and people on the Libreville-Tchibanga road and on the road/river link between Port Gentil, Mandorové, Lambaréné and Ndjolé; and (ii) contribute to improving the living conditions of the people in the PDIA.

Programme Components

2.1.2 To achieve these objectives, programme activities have been grouped into four components summarized in the table below.

Table 2.1: Summary of Programme Components

No.	Component Name	Estimated Cost (UA million)	Component Description
1	Construction of roads and related infrastructure	250.92	1.1 Tarring of: (i) Mouilla-Ndendé (70 km); (ii) Ndendé-Tchibanga (85 km); and (iii) Port Gentil-Mandorové (34 km) roads with spaces for the laying of optical fibre; 1.2 Resurfacing of 74 km of related rural roads; 1.3 Construction of a road terminal and weighing station at Mbadi; 1.4 Construction of two footbridges; 1.5 Rehabilitation of socio-economic infrastructure; 1.6 Support to women's groups in the PDIA; 1.7 Adoption of environmental impact mitigative measures; 1.8 Control and supervision of work, and sensitization of people in the PDIA on road safety, environmental protection, STIs, and other pandemics.
2	Improvement of river navigation	7.10	2.1 Rehabilitation and construction of five river docks: Mandorové, Omboué, Ngoumbi, Achouka and Ndjolé; 2.2 Supply and installation of buoys on the Ogooué; 2.3 Control and supervision of works, and sensitization of people in the PDIA on inland navigation safety.
3	Studies	2.28	3.1 Study on the restructuring of the road sub-sector; 3.2 Study on road construction costs in Gabon; 3.3 Feasibility study on the Lambaréné river port.
4	Institutional support and programme management	6.15	4.1 Technical assistance to MEIAT; 4.2 Programme impact monitoring and assessment; 4.3 Programme financial and accounting audit; 4.4 Programme technical audit; 4.5 Operation of the Executing Agency.

Footbridges

2.1.3 To improve rural mobility and develop the age-old expertise of the local population in footbridge construction, two suspension footbridges will be built under this programme in collaboration with the NGO, Helvetas. Two sites have been identified in the programme impact area in collaboration with the population. For more than 15 years now, Helvetas has been developing unique expertise in low-cost crossing works to improve rural mobility mainly in Asia (Bhutan and Nepal) and East Africa (Ethiopia). Helvetas will train engineers from Gabon's Ministry of Equipment, Infrastructure and Physical Planning (MEIAT) in techniques developed by the NGO, thus enabling them to own the expertise. The aim is to develop national expertise in this area. Local communities will also be trained to maintain and develop these works to ensure their sustainability.

2.2 Technical Solutions Adopted and Alternatives Explored

2.2.1 Technical, social, environmental and economic studies on the Mouila-Ndendé and Ndendé-Tchibanga roads were carried out in 2010 under the RP1. Those concerning the Port Gentil-Mandorové stretch were conducted in 2009 with the Gabonese Government's own funds. The engineering designs chosen took into account the volume of traffic, road transport safety concerns and geometric features that meet design standards in force in Gabon. Thus, the reference speed is 80 km/h on level land, 60 km/h on difficult terrain and down to 40 km/h in winding mountain passes or built-up areas. The pavement structure adopted for the Mouila-Ndendé and Ndendé-Tchibanga roads has the following characteristics: (i) a 20 cm thick subgrade of stabilized material; (ii) a 20 cm thick sub-base course of crushed sand-gravel aggregate; (iii) a 10 cm thick base course of bitumen sand-gravel aggregate; and (iv) a 5 cm thick asphalt surface course. The pavement structure adopted for the Port Gentil-Mandorové road is a classic solution combining a surface course of asphalt concrete (AC), a base course of bitumen sand-gravel aggregate (BSA), a sub-base course of untreated crushed sand-gravel aggregate (CSA), and an improved subgrade of unsorted natural gravel (UNG). Thus, to take into account aggressive traffic and level of urbanization of the first section, the following layout and surface structures were adopted:

Table 2.2: Pavement Systems Adopted for the Port Gentil-Mandorové Road

Section	PK 0 to PK 3	PK 3 to PK 9.6	PK 9.6 to PK 34
Construction	Dual carriageway	Dual carriageway	Single lane
Pavement	5AC + 12 BSA + 20 CSA + 30 UNG	5 AC +10 BSA + 20 CSA +30 GLTV	5 AC +8 BSA +15 CSA +15 UNG

2.2.2 The solution adopted for the Mouila-Ndendé and Ndendé-Tchibanga roads is similar to the one adopted for the Fougamou-Mouila. The programme roads are an extension of these roads. The technical solutions adopted for the Port Gentil-Mandorové road section are also based on the road engineering that has already proved its mettle in the Port Gentil area. All these solutions are the most suitable from the technical, economic and environmental standpoints.

Table 2.3: Alternative Solutions Explored and Reasons for Rejection

Alternative Solution	Brief Description	Reason for Rejection
Alternative: base course of crushed rock aggregate for the Mouila-Ndendé and Ndendé-Tchibanga stretches.	<ul style="list-style-type: none"> • 20 cm-thick improved sub-grade using borrow materials; • Sub-base course of 20 cm-thick crushed sand-gravel aggregate 0/31.5; • Base course of 15 cm-thick crushed sand-gravel aggregate 0/20; • Pavement of 15 cm AC. 	Technically disadvantageous solution due to: (i) the high number of and damage caused by logging trucks; (ii) heavy rainfall for nine out of twelve months; (iii) current road maintenance conditions in Gabon; and (iv) the need to link up the road section with stretches constructed upstream.
Alternative: use of cement treated base course and bituminous sand wearing course on the Port Gentil-Mandorové stretch.	<ul style="list-style-type: none"> • An asphaltic concrete, bitumen sand gravel aggregate, cement-treated selected natural gravel and cement-treated unsorted natural gravel solution; • Bitumen sand surface course, a cement-treated base course sand and a sub-base course of unsorted natural gravel; • Surface course of interlocking paving stone placed on cement-treated selected natural gravel and unsorted natural gravel. 	Technically disadvantageous solutions due to: (i) heavy rainfall in the area; (ii) flood-prone areas; and (iii) inability to use these special techniques. In fact, these solutions proved to be economically unprofitable.

2.3 Programme Type

This programme is a stand-alone operation. It is the financing instrument that is best suited for the Bank's intervention in this operation. All donor operations in the transport sector in Gabon are done through this type of operation (investment projects).

2.4 Estimated Programme Cost and Financing Arrangements

Estimated Programme Cost

2.4.1 The total cost of the second phase of the Road Programme, net of tax and customs duty, including provision for physical contingencies and price escalation, is estimated at CFAF 193.54 billion, or UA 266.45 million at the Bank's foreign exchange rate in July 2011 (UA 1 = CFAF 726.374). The RP2 cost is estimated based on technical, social and environmental studies of the Port Gentil-Mandorové road section conducted in 2009 and those of the Mouila-Ndendé and Ndendé-Tchibanga sections carried out in 2010. The unit costs of works were calculated based on: (i) the results of these studies; (ii) the results of recent bid invitations for similar works funded by the Bank and other donors, particularly the Akieni-Okondja, Lalara-Koumameyong, and Koumameyong-Ovan road sections financed by the IsDB, and the Ndjolé-Médoumana road section (AFD financing); (iii) programming of works procurement earmarked for 2012; (iv) programme implementation scheduled for the 2012-2015 period; and (v) the recommendations of the study on increase in the unit costs of road works conducted by the Bank. The provision for physical contingencies represents 10% of the base cost, while the provision for price escalation represents 7.29% of the sum of the base cost and the provision for physical contingencies. The summaries of the estimated programme cost by component and expenditure category are shown in Tables 2.4 and 2.5 below, respectively. The detailed cost estimates are shown in Technical Annex 1.

Table 2.4: Summary of Estimated Programme Cost by Component

COMPONENTS	CFAF Million			UA Million		
	Foreign Exchange	Local Currency	Total	Foreign Exchange	Local Currency	Total
A - Construction of Roads and Related Infrastructure	123 447.77	30 987.16	154 434.94	169.94	42.68	212.62
B - Improvement of River Transport	3 489.68	882.42	4 372.10	4.82	1.20	6.02
C - Studies	1 120.00	280.00	1 400.00	1.55	0.38	1.93
D - Institutional Support and Programme Management	1 927.60	1 854.33	3 781.93	2.64	2.55	5.19
Base cost	129 985.05	34 003.91	163 988.96	178.95	46.81	225.76
Provision for physical contingencies	12 998.51	3 400.39	16 398.90	17.90	4.68	22.58
Provision for price escalation	10 425.43	2 727.28	13 152.71	14.35	3.76	18.11
TOTAL	153 408.99	40 131.58	193 540.57	211.20	55.25	266.45

Table 2.5: Summary of Programme Cost by Expenditure Category

EXPENDITURE CATEGORIES	CFAF Million			UA Million		
	Foreign Exchange	Local Currency	Total	Foreign Exchange	Local Currency	Total
1. GOODS	384.00	96.00	480.00	0.53	0.13	0.66
2. WORKS	120 223.69	30 055.92	150 279.61	165.51	41.39	206.90
3. SERVICES	9 377.36	2 344.34	11 721.70	12.91	3.22	16.13
4. MISCELLANEOUS EXPENDITURE		1 507.65	1 507.65		2.07	2.07
Base cost	129 985.05	34 003.91	163 988.96	178.95	46.81	225.76
Provision for physical contingencies	12 998.51	3 400.39	16 398.90	17.90	4.68	22.58
Provision for price escalation	10 425.43	2 727.28	13 152.71	14.35	3.76	18.11
TOTAL	153 408.99	40 131.58	193 540.57	211.20	55.25	266.45

Sources of Financing

2.4.2 The proposed programme will be financed jointly by the Bank and the Gabonese Government. The Bank's contribution (a UA 230 million loan) will cover 86.32% of the total programme cost, net of tax and customs duty. The Government's contribution will be UA 36.45 million, i.e. 13.68% of the total programme cost, net of tax and customs duty. The criteria mentioned in the Policy on Expenditure Eligible for Bank Group Financing to justify this level of counterpart contribution are detailed in Technical Annex 2. The financing plan of the entire programme by source of financing is presented in Table 2.6 below.

Table 2.6 Programme Sources of Financing by Expenditure Category (in UA million)

EXPENDITURE CATEGORIES	ADB LOAN			GOV.			Total		
	Foreign Exchange	Local Currency	Total	Foreign Exchange	Local Currency	Total	Foreign Exchange	Local Currency	Total
1. GOODS	0.53	0.06	0.59	0.00	0.07	0.07	0.53	0.13	0.66
2. WORKS	165.51	12.65	178.16	0.00	28.74	28.74	165.51	41.39	206.90
3. SERVICES	12.91	3.22	16.13	0.00	0.00	0.00	12.91	3.22	16.13
4. MISCELLANEOUS EXPENDITURE	0.00	0.00	0.00	0.00	2.07	2.07	0.00	2.07	2.07
Base cost	178.95	15.93	194.88	0.00	30.88	30.88	178.95	46.81	225.76
Provision for physical contingencies	17.90	1.59	19.49	0.00	3.09	3.09	17.90	4.68	22.58
Provision for price escalation	14.35	1.28	15.63	0.00	2.48	2.48	14.35	3.76	18.11
TOTAL	211.20	18.80	230.00	0.00	36.45	36.45	211.20	55.25	266.45

The expenditure schedule by expenditure category of the entire programme is shown in Table 2.7 below.

Table 2.7: Expenditure Schedule by Expenditure Category (in UA million)

EXPENDITURE CATEGORIES	2012	2013	2014	2015	2016	Total
1. GOODS	0.00	0.20	0.26	0.20	0.00	0.66
2. WORKS	40.38	62.09	82.77	21.66	0.00	206.90
3. SERVICES	3.09	5.04	6.15	1.76	0.09	16.13
4. MISCELLANEOUS EXPENDITURE	0.56	0.38	0.37	0.38	0.38	2.07
Base cost	44.03	67.71	89.55	24.00	0.47	225.76
Provision for physical contingencies	4.40	6.77	8.96	2.40	0.05	22.58
Provision for price escalation	3.54	5.43	7.18	1.92	0.04	18.11
TOTAL	51.97	79.91	105.69	28.32	0.56	266.45
Total in %	19.50%	29.99%	39.67%	10.63%	0.21%	100.00%

The expenditure schedule by source of financing of the entire programme is shown in Table 2.8 below.

Table 2.8: Expenditure Schedule by Source of Financing (in UA million)

SOURCE OF FINANCING	2012	2013	2014	2015	2016	Total
ADB	44.65	69.25	91.65	24.34	0.11	230.00
GABONESE GOVERNMENT	7.32	10.66	14.04	3.98	0.45	36.45
TOTAL	51.97	79.91	105.69	28.33	0.56	266.45
Total in %	19.50%	29.99%	39.67%	10.63%	0.21%	100%

2.5 Programme Target Area and Beneficiaries

2.5.1 RP2 operations are located in four provinces: Ngounie, Nyanga, Moyen-Ogooué and Ogooué-Maritime. The 189 km of roads to be built fall within the following three main roads: (i) 70 km on the Mouila-Ndendé road in Ngounie Province, 85 km on the Ndendé-Tchibanga road in Nyanga Province and 34 km on the Port Gentil-Mandorové road. In terms of surface area, these three provinces cover 81 925 km², in other words 30.6% of Gabon's total surface area, and are home to only 17.3% of the country's total population, according to 2005 estimates (DGE, 2008). The Mouila-Ndendé road is located entirely in Ngounie Province and crosses 10 localities besides the towns of Mouila and Ndendé. The 85 km of the Ndendé-Tchibanga road

straddle Ngounie and Nyanga Provinces. This road crosses 12 localities. The last 34 km stretch is entirely in the Ogooué-Maritime Province, including Port-Gentil, Gabon's second largest city, with 105 712 inhabitants (GPHC, 2003) and crosses eight localities with a total population of 7 949. The Ndjolé dock is located in Moyen-Ogooué Province.

2.5.2 It is worth noting that rural areas in Gabon are sparsely populated. Close to 86% of the population lives in urban areas and Libreville alone is home to more than two out of five persons. The population density per km² is respectively 2.4 in Ngounie; 2.1 in Nyanga and 6.6 in Ogooué-Maritime (DGE, 2008). Concerning education, the literacy rate is estimated at 85.4% (South Africa: 82.4%; Lesotho: 81.4%; Equatorial Guinea: 84.2%). Ngounie and Nyanga Provinces have the lowest literacy rates (67.8%): the literacy rate differs between men (75.5%) and women (60.1%). The literacy rate in Port Gentil is 91.4%. The net enrolment rate (NER) in primary school in the PDIA is estimated at 92.44%, which is virtually the same as the national average with hardly any difference between the sexes. The NER in secondary school in the PDIA is 28.3%, compared to a national average of 52.66%, and 57.3% for Port Gentil. This low rate is due in part to lack of access to schools: the average time required to reach a secondary school is about 126 minutes, compared to 20 minutes for a primary school. The rehabilitation of related rural roads and other social infrastructure under RP2 will contribute to improving education sector indicators.

2.5.3 In the PDIA as in the rest of the country, there are still high HIV/AIDS prevalence rates. The national prevalence rate in 2010 was 5.2%. The prevalence rate is 8.7% for Ogooué-Maritime, 8.1% for Ngounié, 5.6% for Moyen-Ogooué and 5.2% for Nyanga. With RP2 implementation, special emphasis will be laid on raising awareness on the pandemic, especially since transport sector activities expose workers and the population of roadside villages to HIV infection.

2.5.4 Another feature of the PDIA is isolation and difficult access to some work camps and villages. In the Port Gentil-Mandorové road, for instance, during the dry season, the current sandy road is hardly motorable and limits access to many localities, including schools. This is true of the school for street children at Ntchengué. The construction of the planned rural roads under RP2 aims specifically to eliminate such isolation. Many rivers are also found within the PDIA. Crossing these rivers during the rainy season where there are no suitable crossing works constitutes a hazard to the population. Hence, two sites have been identified by the communities for the construction of two footbridges to facilitate movement within the PDIA. The sites are: (i) in Ndendé upstream of River Dola and (ii) in Lebamba on River Louetsi towards Bongolo.

2.6 Participatory Approach for Programme Identification, Design and Implementation

2.6.1 Various stakeholders were consulted during the conduct of detailed studies, the ESIA and RCP update missions, and the RP2 preparation and appraisal missions. Participatory meetings were held with the population, the main road users and actors of Gabon's transport system (carriers, NGO officials, technical services, etc.). Discussions were held with representatives of the PDIA population and the method of compensation of persons who will be affected by expropriation examined during two plenary sessions held at Mouilla in Ngounié Province and at Port-Gentil in Ogooué-Maritime Province. Participants unanimously hailed the RP2 and proposed solutions to improve the safety of roadside dwellers and animals, and contributed to identifying related facilities to be built.

2.6.2 During RP2 implementation, the participatory approach will be pursued, particularly during site coordination meetings and programme impact monitoring studies (establishment of

the baseline case and impact assessment). MEIAT (the Executing Agency) as well as the Bank's Gabon Regional Office will continue this process during the programme implementation phase.

2.6.3 Consultations with donors and development partners present in Gabon helped to: (i) exploit available data on the sector; (ii) define their actions within the overall context of the sector; and (iii) define the programme components. During programme implementation, such collaboration will be pursued, particularly during meetings of the Thematic Group of TFPs involved in the transport sector, various supervision missions and the validation of study reports.

2.7 Bank Group Experience and Lessons Reflected in Programme Design

2.7.1 The Bank's active portfolio in Gabon comprises eight operations (excluding the loan to the private sector, which has been fully disbursed) for a total commitment of UA 339.4 million, of which UA 335.95 million for project loans and UA 3.45 million for non-lending operations. The transport sector represents 64% of the total volume of commitments, followed by the social sector (29%) and the agriculture sector (7%) (see Appendix II). The average age of portfolio projects dropped from 8.4 years in 2006 to 2.3 years in May 2011, while the average size increased from UA 15.7 million to UA 43.51 million during the same period. The overall portfolio disbursement rate is 26.88%. The performance of the Bank's portfolio in Gabon has improved with a score of 2.09 out of 3. All actions recommended following the 2007 review to improve the portfolio have been carried out and the on-going portfolio has no aged project. However, the Education IV Project approved in 2009, but not yet effective, and the Fisheries and Fish Farming Sector Support Project with a 22.4% disbursement rate and 6 years of age, may fall under the status of potentially problematic projects (PPP). This would affect portfolio performance.

2.7.2 So far, besides the on-going RP1, the Bank has financed 3 (three) road projects in Gabon, namely: (i) the Road Maintenance Project approved in 1989 for UA 25.74 million and completed in 1993; (ii) the Road Rehabilitation and Development Project approved in 1993 for UA 72.55 million and completed in 1997; and (iii) the Franceville-La Léyou Road Rehabilitation and the La Léyou-Lastourville Road Development Project approved in December 1995 for UA 53 million. Concerning the last project, construction work has been completed on the Franceville-La Léyou road. Meanwhile, the sum of UA 31 million for the development of the La Léyou-Lastourville road was cancelled because additional geotechnical and drainage studies deemed necessary were not available. These studies were conducted later on and helped to include the La Léyou-Lastourville stretch in RP1.

2.7.3 The internal audit of projects conducted in November 2008 and the portfolio review of September 2010 highlighted major weaknesses concerning: (i) the mastery of Bank rules and procedures; (ii) project financial management; (iii) long delays in the ratification of agreements; (iv) slowness in establishing project management organs; (v) high mobility of project managers; and (vi) difficulties in mobilizing the national counterpart contribution. Additional difficulties that affected RP1 implementation were: (vii) poor performance of contractors; (viii) dual project supervision; (ix) shortage of local workforce; (x) late payment of compensation for expropriation; and (xi) inaccuracies in project impact monitoring/evaluation system.

2.7.4 In designing the programme, account was taken of lessons from previous Bank operations in general, and those of the road sub-sector in particular, as well as those described in the only available project completion report (PCR), namely the 2001 Road Rehabilitation and Development Project Completion Report. The main lessons, elements of which are summarized in paragraph 4.5 (Risk Management), include: (i) the intensification of programme technical, administrative and financial monitoring by the executing agency; (ii) scheduling of regular Bank

supervision; (iii) detailed and realistic review of the cost of works during the appraisal mission; (iv) reduction of the time between studies and works start-up; (v) the need to allow contractors to choose the suppliers of the construction materials they need; (vi) the obligation to refer, in the BD, to international standards or, failing which, to national standards followed by the words “or equivalent”; (vii) the need to improve the programming of investments to guarantee the mobilization of the counterpart contribution; (viii) the need to ensure that an initial deposit is made into the counterpart contribution account to cover expropriation expenses and Government’s share of mobilization advances; (ix) the need to ensure that the counterpart contribution account is regularly replenished in accordance with the disbursement schedule; (x) continued implementation of the directives contained in Memo No. 0608/MEIAT/CAB-M/SG of 13 April 2010 to end dualism in site management supervision; (xi) the experience acquired by the General Directorate of Infrastructure Studies in procurement under RP1; (xii) the need to maintain facilities for importing skilled labour from abroad; and (xiii) the use of the procedures manual and accounting system developed under RP1.

2.8 Key Performance Indicators

2.8.1 The main expected outputs of RP2 include: 189 km of paved roads with space for optical fibre; 74 km of rehabilitated feeder roads; 1 120 lm of fences built around schools and health centres along the roads; 30 batches of small items of transport and processing equipment distributed to women’s associations; 2 footbridges built; 5 river docks constructed; 120 floating and fixed buoys installed; a bus terminal and a weighing station constructed; 5 000 persons, 55% of them women, sensitized on road and inland navigation safety, protection against HIV/AIDS and environmental protection; and a monitoring and evaluation database established and functional.

2.8.2 If all the expected outputs are achieved, the programme will help to improve regional trade, open up localities in the PDIA, optimize the numerous agro-pastoral and tourism potential of the localities, create jobs, and improve the living conditions of people in the PDIA. The main programme output indicators are: (i) average traffic speed on the Libreville-Tchibanga road; (ii) vehicle operating costs; (iii) number of accidents on River Ogooué; (iv) rural access rate in the PDIA; and (v) average household income. At programme start-up, the General Directorate of Statistics (DGS) will establish the baseline case for the aforementioned indicators and conduct an impact assessment at the end of the programme. Thus, the study of the baseline case will help to establish the rural access index (percentage of the population with access to an all-season road located less than 2 km away) in Ngounié, Nyanga and Ogooué-Maritime Provinces.

2.8.3 To carry out these operations on schedule, efficiency in programme management is vital. RP2 performance indicators are: (i) an effectiveness timeframe of not more than 360 days; (ii) an annual disbursement rate of at least 18%; and (iii) mean programme status indicator (PI). These indicators will be monitored during supervision missions and routine management of the Programme.

III. PROGRAMME FEASIBILITY

3.1 Economic and Financial Performance

3.1.1 Existing programme roads, excluding the urban section of the Port Gentil-Ntchengué stretch, are earth roads with very high degradation indices ranging from 12 m/km to 16 m/km. Despite this low service level, the roads under consideration bear relatively high volumes of daily traffic ranging between 76 and 305 vehicles of all categories. An analysis of the without- and with-programme situations shows that the project will generate many economic benefits, the most expected of which are: (i) a significant increase in traffic on all RP2 roads; (ii) reduction in vehicle operating cost; (iii) decrease in routine maintenance cost; and (iv) external benefits

related to the value added of the primary sector (agricultural produce, timber, fisheries). To these quantifiable benefits should be added the residual value estimated at about 38% of the investment cost. This is justified by the engineering design adopted for the roads under the programme and by the maintenance strategy adopted by the Executing Agency, based on a second generation Road Maintenance Fund (FER2).

3.1.2 The evaluation of the investment cost, at 2010 prices, for the development of programme roads and docks gives a 26.45% internal rate of return for the entire RP2. A sensitivity analysis of a concurrent 10% increase in investment cost and a 10% reduction in benefits (most unfavourable case) gives a 22.65% economic internal rate of return (EIRR) for the entire RP2. Based on the foregoing, the level of development of roads under the programme is economically viable. The detailed economic analysis is presented in Technical Annex 4.

Table 3.1: Summary of Economic Analysis

Net Present Value (NPV) in CFAF billion	133.26
Economic Internal Rate of Return (EIRR) in %	26.45
Sensitivity of the EIRR in % (concurrent 10% increase in costs and 10% reduction in benefits)	22.65
Discount rate	12%
Residual value of investment after 20 years	30%

3.2. Environmental and Social Impact

Environment

3.2.1 The programme is classified under Environmental Category 1. In compliance with the environmental policy requirements of the Bank and Gabon, an Environmental and Social Impact Assessment (ESIA) was carried out and validated by the Ministry of Environment. The summaries of the ESIA and the Resettlement and Compensation Plan (RCP) were published on 17 August 2010 at the Bank's Public Information Centre (PIC). The main positive impact expected from the programme includes: (i) improvement of the living standards of the local population; (ii) creation of jobs for the local population, especially youths, during the construction phase and, subsequently, during road operation and maintenance; (iii) easier access to health centres; (iv) increased demand for catering services, beverages, manufactured food products, housing and transport within the programme area; (v) supply of produce to traders all year round and easier transportation of agricultural produce and handicrafts to markets; (vi) increase in the production and marketing of agricultural products and handicrafts; and (vii) development of ecotourism.

3.2.2 The main negative impact concerns: (i) loss of property, including 24 houses and a borehole along the Ndendé-Tchibanga road and 12 houses, 7 shops and 3 sheds along the Port Gentil-Mandorové road, as well as annual tillage cropland (cassava, taro, vegetables) whose owners will be compensated and resettled less than 100 m away from the road's right-of-way. In all, 89 persons will be resettled (47 along the Ndendé-Tchibanga road and 42 along the Port Gentil-Mandorové road); (ii) nuisances during the construction phase (noises, vibrations, smoke and dust caused by construction machines); (iii) road insecurity due to an increase in traffic volume and speed; (iv) pollution of surface and ground water by oil spill; (v) risk of spread of STIs, including HIV/AIDS, due to abundant traffic and the intermingling of people; and (vi) limited reduction of plant cover following the felling of trees to free rights-of-way and probably minor road realignments in certain areas. Other trees could be affected due to the exploitation of borrow pits and quarry sites. Most negative outcomes will be limited to the works execution phase (excavation, levelling, asphaltting, quarry and borrow pit exploitation, transportation of construction materials, vehicle maintenance, etc.).

3.2.3 Measures to mitigate the potential negative effects described above include: (a) controls, technical inspections and regular engine maintenance; road and diversion watering to limit the emanation of dust as well as reasoned choices of dump sites for bush-clearing waste and other expendable earthwork materials; and providing workers with protective equipment; (b) proper site sign-posting with traffic controllers, speed limitation on works and quarry sites, construction of speed bumps in major built-up areas, installation of adequate road signs; and sensitization of all stakeholders; (c) establishment of a system of collection and containment of pollutant exudations prior to storage and disposal, and construction of wire fences, nets and protective panels, etc. to prevent the discharge of construction materials and scraps into rivers; installation of onsite sanitary facilities and concrete pits for collecting wastewater, oils, filters and batteries; and (d) installation of awareness signs to sensitize the population and site workers on the dangers of STIs, including AIDS. In addition, the organization of information, education and communication (IEC) campaigns to raise the population's awareness on road safety, environmental protection and control of STIs, including HIV/AIDS, in line with national programmes are also planned under RP2. Compensatory reforestation on potential borrow pit and quarry sites as well as street tree planting at the entry and exit of the towns of Mouila, Ndendé, Tchibanga and Port Gentil is also recommended. The total cost of RP2 impact mitigative/improvement measures and support actions is estimated at CFAF 2 987 237 050. However, the cost of IEC measures on HIV/AIDS, road safety, environmental protection, planting of roadside trees and levelling of borrow sites is CFAF 715 445 000. The cost of compensation is estimated at CFAF 125 219 000.

Climate Change

3.2.4 The construction and tarring of programme roads will not have any major impact on climate change, which is a global phenomenon. However, with road widening and surfacing, traffic fluidity will be improved in the PDIA, leading to reduced vehicle emissions, the main greenhouse gas emission (GHG) factor. Motor exhaust fumes (mainly CO₂) in the atmosphere will also be reduced, especially because of: (i) reduction in travel time; and (ii) reduction in the number of manoeuvres during vehicle driving. In addition, the planting and maintenance of appropriate trees along the road and in the programme area will contribute to sequestering part of atmospheric carbon dioxide. Hence, the following measures will contribute to controlling the effects of climate warming: (i) regrowth of borrow areas along the road through the systematic planting of trees and reconstitution of the vegetation, and (ii) planting of trees on both sides of the road. Thus, 23 000 trees will be planted.

3.2.5 Climate change was taken into account in designing RP2 by boxing up road sections to be built and sizing hydraulic structures. The road design took into consideration higher hydrological flows in sizing the drainage structure, considering excessive rainfall that could result from climate change-related phenomena. Existing small culverts will be replaced with larger box drains. Weirs and flood control works will be built upstream and downstream of the structures along the programme roads as well as on river banks. Appropriate measures were adopted in the design to ensure that the maintenance of these structures during operation will enable adequate protection against climate sensitivity. The programme also includes a River Ogooué navigation component to help to enhance access to remote areas of the region through low greenhouse gas emission mode of transportation, while preserving forests, protected natural areas and mangrove forests.

Gender Issues

3.2.6 Although gender equality is enshrined in the Constitution and a National Gender Strategy was adopted, gender disparities still exist in Gabon. Gabon's National Strategy on

Gender Equity and Equality (SENEEB) was prepared in 2009, after a long participatory process initiated in 2007. Overall, the country's context encourages equal opportunities. Gabon adhered to the orientations defined by the United Nations through the Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW) in 1983 as well as the 1995 Beijing Platform for Action, the MDGs and the 2004 Declaration of Heads of State of the African Union on Equality. In addition, its basic instruments uphold the principle of gender equality. Nevertheless, many recent studies indicate a number of disparities to the disadvantage of women, in particular: (i) women are poorer and more vulnerable to unemployment than men (the unemployment rate is 27% for women against 16% for men); (ii) women are less educated and less well trained than men (high school repeater, dismissal and drop-out rate, particularly among girls, of 26% to 30%); and (iii) the underprivileged and rural dwellers have limited access to the health system and there is high maternal (520/1000) and neonatal mortality, sexual precocity among girl children and low use of means of protection against STIs and HIV. A survey on economically marginal Gabonese (RGEF, 2008) shows that women account for 63% of economically marginal Gabonese, against 51% for the entire population. In this group, 95.1% of economically marginal teenage mothers are very vulnerable (29.6% are unemployed and about 44.9% are still in school).

3.2.7 In view of this distinctive situation of women, RP2 includes a series of specific actions for women and women's associations. The aim is to rehabilitate the social centres of Mouilla and Port-Gentil and family homes (chairs and audio-visual equipment for the training of girls), provide equipment for processing agricultural produce, intermediate means of transport and small farm tools, organize targeted sensitization campaigns on themes specific to women (early pregnancies, HIV/AIDS, etc.), and provide support to strengthen women's associations. Thus, the expected positive impact for the population of the PDIA, particularly women, includes: (i) improvement in conditions of transportation to markets and production zones; (ii) increase in farm incomes; (iii) improvement of access to socio-economic infrastructure such as health centres and educational centres owing to a reduction in travel time; (iv) increase of income through employment opportunities in work sites, catering and construction camp maintenance services, and creation of income-generating activities at the end of the programme; and (v) reduction in the cost of medical evacuation and improved knowledge of risks of such diseases as HIV/AIDS, malaria, *chicunguya* and dengue fever.

Social Issues

3.2.8 Gabon is classified among middle-income countries in view of its high gross national income (GNI) per capita, which was USD 12 747 in 2010. It is also ranked 93rd out of 169 countries in terms of its Human Development Index (HDI), which was 0.648 according to the 2010 Human Development Report. However, it remains a country where most Millennium Development Goals will not be achieved by 2015. According to the results of the Gabonese Poverty Evaluation and Monitoring Survey (EGEP 2005), the incidence of poverty in the country is approximately 33%. The survey not only confirms the urban nature of poverty in Gabon, but also persistent vertical inequalities. Although the majority of the poor live in urban areas (Libreville and Port-Gentil), poverty is more pronounced in rural areas. In fact, 86% of the population (75% of whom are poor), live in urban areas with a poverty incidence of about 30%. In contrast, 20% of the population (25% of whom are poor) live in rural areas with a 45% poverty incidence. The employment situation is relatively precarious as the oil sector has only a marginal impact on it. The unemployment rate estimated at more than 20% is worrying. Unemployed youths are said to account for 60% of the unemployed population.

3.2.9 According to regions, Libreville and the West Region have the lowest incidence of poverty, and the North and South Regions the highest, while the PDIA comprising Port-Gentil

and the South-West Provinces have an average incidence of poverty. The upgrading of road infrastructure and conditions of navigation on River Ogooué will result in a reduction in vehicle and ferry operating costs, and hence the cost of public transport. Road users will benefit from part of this reduction, thanks to a drop in tariffs and transport fares.

3.2.10 To increase the socio-economic impact of RP2, related facilities (Section 2.1.2) as well as other specific actions targeting vulnerable people will be implemented. These include the rehabilitation of not only socio-economic infrastructure (schools, health and social centres, etc.) but also rural roads to open up agricultural production zones and footbridges to improve rural accessibility as well as specific actions targeting women presented in Section 3.2.7 above. RP2 will also help to create 600 seasonal jobs through the construction of roads and related facilities, and various sensitization campaigns. By contributing to income-generation in the PDIA (increase in the prices of agricultural produce, improved access to agricultural inputs, improved marketing of agricultural and forest products, development of tourism potential, payment of wages to workers, small catering services near work sites and camps, etc.) and improving access to and opening up rural areas (rural roads, footbridges, etc.), RP2 will effectively contribute to improving the living conditions of people in the PDIA, thereby reducing poverty. Thus, it will contribute to the achievement by Gabon of the Millennium Development Goals (MDGs). The planned monitoring and evaluation mechanism for this programme will help to ensure the realistic evaluation of this contribution (see Section 4.2).

3.2.11 RP2 also includes components concerning sensitization on road safety, inland navigation safety, STIs, in particular HIV/AIDS, and other pandemics (malaria, *chicunguya*, etc.). The planned actions focus on close sensitization of various target groups in localities crossed by roads, River Ogooué, in the Fernand Vaz Lagoon, construction workers as well as carriers. Large public sensitization and voluntary HIV/AIDS screening campaigns are equally envisaged. Billboards will be installed along highways and at landing piers.

Compulsory Resettlement

3.2.12 A resettlement and compensation plan for the population was prepared in accordance with the Bank's Guidelines on Involuntary Displacement and Resettlement. Expropriation under this programme will affect farmland and 89 persons (47 on the Ndendé-Tchibanga road and 42 on the Port Gentil-Mandorové road) to be displaced. The affected families will be compensated and resettled in accordance with the environmental instruments in force. The cost of compensation for expropriation, to be borne by the Government, is CFAF 125 219 000, and will be paid before works start-up. The Government will provide the Bank with evidence of paying compensation for the expropriation of houses and land. This constitutes a loan condition (Conditions B.3 and C.5).

IV. PROGRAMME IMPLEMENTATION

4.1. Implementation Arrangements

Executing Agency

4.1.1 As with RP1, the programme's executing agency will be the Ministry of Equipment, Infrastructure and Physical Planning (MEIAT), which will also be the project owner. It will supervise the programme through the Secretariat General (SG), backed by: (i) the General Directorate of Transport Infrastructure (DGIT) for road construction in accordance with Memo No. 608/MEIAT/CAB-M/SG of 13 April 2010 issued within the framework of RP1 and defining responsibilities in the management of work sites; (ii) the General Directorate of Infrastructure Studies (DGEI) for conducting studies; and (iii) the General Directorate of Merchant Shipping (DGMM) for implementing the river component. Considering the scope of the two phases of the

road programme, a road engineer will be appointed to the Secretariat General to coordinate all programme activities under the authority of the Secretary-General. In addition, an accountant will be placed at the disposal of the programme to keep and manage accounts for all programme activities. The appointment of the road engineer and accountant, whose qualifications and experience shall have been submitted to the Bank beforehand for approval, is a loan condition (Condition B.1). The road engineer and accountant will be recruited based on the terms of reference that would have been submitted beforehand to the Bank for its 'no objection' opinion. Staff posted to the programme will be governed by performance contracts and will be subject to regular performance evaluation.

Institutional Arrangements

4.1.2 Under the authority of the Secretary-General, each General Directorate will be responsible for implementing programme components. Concerning the day-to-day monitoring of works, the Administration will appoint a counterpart to the consultant for each of the three roads under the programme to oversee the works. The CVs of the counterpart engineers will be submitted to the Bank for its 'no objection' opinion before their appointment. The procedures manual prepared for RP1 will be adapted to the new arrangements and will govern the functioning of the executing agency. The running cost of the Executing Agency is included in the counterpart contribution to this programme's financing. Evidence of the regular mobilization of the counterpart contribution is a loan condition.

4.1.3 To strengthen its technical and operational capacity, MEIAT will benefit from technical assistance made up of two long-term experts and ad hoc experts. Such assistance will support MEIAT in the procurement process and in monitoring the implementation of RP2 components. Furthermore, qualified and experienced consulting firms will be recruited to monitor and supervise works. An independent accounting firm will be recruited to audit programme accounts, while the General Directorate of Statistics (DGS) will monitor and assess programme impact under contract.

Procurement

4.1.4 MEIAT will be responsible for all procurements under the programme. During the first quarter of 2011, the Bank carried out a detailed review of national public procurement procedures and national bidding documents to evaluate the national public procurement system. According to provisional survey findings, although there are similarities between national and Bank procurement procedures, reforms should be pursued to fill certain institutional, organizational, legislative and regulatory gaps. The results of this evaluation will help to define necessary measures to promote the use of national procurement systems in the long run.

4.1.5 All procurements of goods, works and services under this programme financed with Bank resources will be undertaken in accordance Bank Rules of Procedure for the Procurement of Goods, Works and Services (May 2008 edition) using the Bank's relevant standard bidding documents. Procurements of supplies and consumables for the functioning of the Executing Agency, financed entirely with national counterpart funds, will be undertaken in accordance with national procedures. Arrangements for the procurement of works and services are detailed in Technical Annex 3.

Financial Management

4.1.6 MEIAT will be responsible for the programme's administrative, financial and accounting management. It will establish a system for proper financial implementation of the

programme comprising: (i) a programme administrative, financial and accounting procedures manual (the procedures manual prepared for RP1 will be adapted to the institutional framework of RP2); (ii) an accounting system that helps to generate, at any time, accounting and financial statements required by the Bank; and (iii) a clear separation of functions.

Disbursement

4.1.7 Loan disbursements for goods, works and consultancy services will be made through the direct payment method to various contractors, backed by standard supporting documents as specified in the Bank's Disbursement Manual.

4.1.8 To facilitate the speedy mobilization of the national counterpart contribution, the Government has decided to open a counterpart fund account at the *Agence Comptable Centrale des Dépôts* (Central Deposit Accounting Agency) in the programme's name, into which counterpart funds will be deposited. Evidence of opening the account is a loan condition. The counterpart fund account will be replenished every six months, in accordance with an annual expenditure schedule. Evidence of an initial deposit of CFAF 2.5 billion and regular replenishment of the account with an amount equivalent to the half-yearly expenditure of the national counterpart contribution (works, goods, expropriation, and functioning of the Executing Agency) by Government are loan conditions (Conditions B.2 and C.1).

Auditing

4.1.9 The programme's Executing Agency will keep programme accounts separately, using a private computerized accounting system and plan. The system will help to monitor programme expenditure in accordance with estimates by source of financing, expenditure category and component. An external audit of programme accounts will be carried out annually by an external auditing firm recruited in accordance with the Bank's terms of reference. Provision will be made from programme resources for this purpose. Audit reports will be submitted to the Bank latest six months following the end of each accounting year.

Implementation and Supervision Schedule

4.1.10 The programme will be implemented from September 2011 to December 2016, as indicated in the corresponding implementation schedule summarized at the beginning of this report. Upon loan approval, the Bank will launch the programme and thereafter conduct supervision missions, the provisional schedule and composition of which are shown in Table 4.1 below.

Table 4.1: Provisional Supervision Programme

Estimated Period	Activity	Mission Composition	Staff-Week
December 2011	Launching	Project Officers (Engineer and Transport Economist), 1 Disbursement Officer, 1 Procurement Officer + GAFO	6
April 2012	Supervision	Project Officers + GAFO	6
October 2012	Supervision	Project Officers + GAFO	6
April 2013	Supervision	Project Officers + GAFO	4.5
October 2013	Supervision	Project Officers + GAFO	4.5
April 2014	Supervision	Project Officers + GAFO	4.5
October 2014	Programme mid-term review	Project Officers, 1 Socio-economist, 1 Financial Management Officer + GAFO	9
April 2015	Supervision	Project Officers + GAFO	4.5
October 2015	Supervision	Project Officers + GAFO	4.5
April 2016	Supervision	Project Officers + GAFO	4.5
November 2016	Completion report	Project Officers, 1 Socio-economist + GAFO	8
Total			62

4.2 Programme Monitoring and Evaluation

4.2.1 A monitoring and evaluation mechanism will be established for RP2 implementation. It will comprise the following two main components: (i) monitoring of implementation by MEIAT through its General Directorate of Statistics (DGS), and (ii) monitoring of programme socio-economic impact. The DGS of the Ministry of the Economy, Trade, Industry and Tourism (MECIT) will be involved in implementing the second component of the monitoring and evaluation mechanism by: (i) establishing the baseline case before the start-up of works, and (ii) assessing socio-economic impact at the end of the programme. The monitoring of socio-economic impact will be carried out based on impact indicators to be specified in the baseline case report, in addition to those defined in the logical framework. The indicators will also be disaggregated by type. To that end, an agreement will be signed between MEIAT and the DGS for conducting monitoring activities.

4.2.2 The monitoring of programme implementation will help to gather information on the conduct of RP2 activities. Most of the information will be obtained through MEIAT and Bank's monitoring and supervision missions. It will help to determine the level of programme physical (the overall implementation rate and the implementation rate of each RP2 component) and financial (commitment and implementation rates) implementation. To facilitate the management of information to be collected on RP2 and other road programmes, a Relational Monitoring and Evaluation Database (RMED) will be established in the MEIAT General Directorate of Statistics within the RP2 framework.

4.2.3 In addition to the aforementioned monitoring and evaluation mechanism, the Executing Agency will regularly submit quarterly programme progress reports to the Bank. The reports will include the status of implementation of environmental and social action plans, using the Bank's standard format, covering all RP2 activities. The reports will also include physical, financial, social and environmental indicators that will help to verify the level of achievement of expected programme outputs. Programme monitoring and evaluation will also be conducted through Bank supervision missions in line with its operations manual.

4.3 Governance

4.3.1 In April 2010, the Government prepared the Gabon Emergent Budget Framework Paper 2011-2016 comprising three (3) main strategic thrusts, with Thrust 3 focusing on the sharing of the fruits of growth. Thus, as part of the improvement of public spending effectiveness, the new authorities initiated far-reaching civil service and public finance reforms in October 2009. These include: (i) reduction of the number of ministers; (ii) adoption of the principle of compulsory declaration of assets by ministers and administrative officials; (iii) conduct of public service audits that have helped to better streamline the workforce and the wage bill as well as internal and external debt; (iv) banning the combination of the office Member of Parliament and senator with the functions of chairperson of the board of directors of a public, semi-public and private company or establishment; and (v) shutdown of such inefficient "budget-guzzling" semi-public establishments as the Gabon Assistance and Guarantee Fund (FAGA) and the Development and Expansion Fund (FODEX), which have been struck off the roll of credit establishments. Since its adherence to the Extractive Industries Transparency Initiative (EITI) in 2005, Gabon has made progress and attained "close to compliant" status following the validation report submitted to the EITI Board of Directors in October 2010.

4.3.2 Concerning the road sub-sector, the EU will implement a road maintenance support project under the Tenth EDF to improve road management, in particular road maintenance,

through good governance and capacity building of the departments concerned and private sector actors (SMEs and consulting firms).

4.3.3 Specific measures to mitigate risks concerning the governance of this programme will include: (i) the prior study and approval by the Bank of all procurement activities under the programme; (ii) Bank supervision and technical audits to ensure that services and works actually executed are consistent with specifications; (iii) recruitment of an independent financial audit firm to ensure the judicious use of funds for the intended purposes; and (iv) use of the direct payment method to transfer programme funds directly to suppliers, contractors and service providers.

4.4. Sustainability

4.4.1. Programme sustainability will depend on the quality of work done and eventually on conditions for operating the road and related facilities. It will also largely depend on Government's capacity to programme, finance and maintain sanitation and pavement works on schedule.

4.4.2. The technical solutions adopted for the pavement structure of the various programme roads were determined, taking into account the expected traffic load. The solutions are consistent with the technical and road safety standards in force in Gabon and the ECCAS sub-region. The solutions are deemed adequate to guarantee a normal service life in view of the expected traffic load as well as topographic characteristics and climatic conditions. Technical studies identified quality materials in the programme area that can be used. Furthermore, consultants will control works (roads and related facilities) to ensure the quality of structures.

4.4.3. MEIAT will ensure the programming and management of road maintenance through the General Directorate of Road and Aerodrome Maintenance (DGERA), which is responsible for: (a) implementing road and aerodrome maintenance programmes; (b) managing, maintaining, conserving and protecting the national road heritage; (c) assessing and maintaining the road network under local councils at their request; and (d) promoting and supervising small- and medium-size enterprises involved in road maintenance. Given the modest results of the first Road Maintenance Fund and to sustainably address road maintenance financing needs, Gabon established a second generation Road Maintenance Fund (FER2) by Law No. 4/2006 of 9 February 2006, which became operational in March 2007. The reforms led TFPs to establish FER2 and MEIAT support mechanisms. Accordingly, under RP1, Bank is financing: (i) a study on the organization of road maintenance; (ii) a staff training programme; and (iii) a computer hardware and office equipment support. For its part, the EU is financing under the Ninth EDF, Gabon's Road Maintenance Support Project (PERFED) to build capacity in road maintenance by: (i) providing assistance to DGERA in programming, establishing a computerized road database (CRD) and monitoring road maintenance works; and (ii) providing support to SMEs in the preparation of bids and organization of works through on-site training.

4.4.4 FER2 annual budget resources levelled off at CFAF 33 billion and are derived from three sources, the main one of which is the Road Wear Levy (RWL). The amount of the levy on oil products is CFAF 53.20/litre for premium grade petrol and CFAF 47.08/litre for diesel. The other sources are the Additional Wage Tax (AWT) and the Insurance Tax (IT).

4.4.5 Following the road maintenance technical audit financed by FER2 during the 2007 and 2008 financial years, MEIAT defined the priority road network "eligible" for FER2 financing (Circular No. 1471/MEIAT/CAB of 12 August 2010). The 6 132 km-long priority network (or 67% of Gabon's road network) is classified into three levels. It is essential to maintain Level 1

roads (2 677 km) before envisaging the maintenance of Levels 2 (1 832 km) and 3 (1 623 km) roads, excluding emergency maintenance. The definition of this priority network will enable the optimum use of current FER2 resources. The programme roads are part of the priority network. Furthermore, in accordance with the recommendations of the said technical audit, MEIAT has undertaken to prepare a new collaboration agreement between FER2 and DGERA especially to improve procurement, certificates and payment processing timeframes (Conditions C.3).

4.4.6 In addition, as part of the protection of the national road heritage, the efficient technical control of vehicles and control of compliance with axle load limit will help to reduce the early degradation of roads and contribute to preserving them. To this end, a weighing station will be built and equipped at Mbada. Therefore, the Government has undertaken to publish the implementing decree of Law No.13/2003 of 17 February 2005 to protect the national road heritage latest on 31 March 2012, and ensure its effective application (Condition C.4).

4.5 Risk Management

The successful implementation of the programme and attainment of its specific objectives depend on a number of assumptions, each of which constitutes a potential risk factor.

4.5.1 *Delay in loan ratification* – the Government is committed to taking all the necessary measures with the various stakeholders (the Ministry of Economy, Parliament and the Supreme Court) to reduce the ratification period.

4.5.2 *Shortage of technical staff at MEIAT* – the programme has provided for technical assistance and institutional support for works management and execution, and for ensuring the quality of studies to be carried out under the programme. In addition to the coordinator, an accountant will be recruited to keep programme accounts and a counterpart engineer appointed to monitor the construction of each of the three roads.

4.5.3 *Increase in work costs* - the risk of an increase in costs due to the volatility of commodity prices (in particular oil and cement) has been mitigated by a thorough examination of engineering studies, a realistic comparison of cost estimates based on recent bids for similar contracts, a short period between the completion of studies and launching of competitive bidding and provision of necessary resources for contingencies.

4.5.4 *Mobilization of the counterpart contribution* - this risk will be mitigated by Government's commitment to provide necessary resources in its investment budget for counterpart contribution to the programme, to deposit them on a half-yearly basis into an account opened for that purpose, and to provide an initial CFAF 2.5 billion (to cover expropriation expenses and Government's share of mobilization advances, and the running of the Executing Agency), as indicated in paragraph 4.1.7 above (Conditions B.2 and C.1).

4.5.5 *Overloading of logging trucks* - the programme intends to procure and install a weighing station on the Mouila-Ndendé-Tchibanga highway and to carry out sensitization campaigns to encourage carriers to respect the axle load limit. Furthermore, the Government has pledged to apply the law on the protection of the national road heritage.

4.5.6 *Inadequate FER2 resources* - this risk will be mitigated by Government's commitment to pay to FER2 all the resources allocated to it by law (Condition C.2).

4.6 Knowledge Building

4.6.1 The emphasis placed on Programme impact assessment seeks mainly to address the need to build knowledge. The establishment of a baseline case before the start-up of RP2 activities will help to establish a basis for comparison, in order to realistically assess the level of attainment of the programme's development objectives. Comparative data will be obtained from the results of the programme impact assessment to be carried out at the end of construction work. A national workshop will be held to disseminate knowledge drawn from these studies.

4.6.2 The main knowledge acquired and lessons drawn will be managed from a relational database at the MEIAT Department of Statistics. The database will effectively facilitate the management of all knowledge acquired from the activities, achievements, main outputs, and lessons from the programme. Summaries may be published on the Bank's website.

V. LEGAL FRAMEWORK

5.1 Legal Instrument

This will be a loan granted to the Republic of Gabon to finance this programme.

5.2 Conditions Associated with Bank's Involvement

A. Conditions precedent to loan effectiveness

Entry into force of the loan agreement shall be subject to fulfilment by the Borrower of the conditions provided for in Sections 12.01 and 12.02 of the General Conditions Applicable to Loan and Guarantee Agreements.

B. Conditions precedent to first disbursement of the loan

The first disbursement of loan resources shall be subject to fulfilment by the Borrower of the following conditions:

- (1) Provide to the Bank evidence of appointing to the programme a road engineer and an accountant whose CVs would have been approved beforehand by the Bank (paragraph 4.1.1);
- (2) Provide to the Bank evidence of opening an account in the name of the programme into which counterpart funds will be deposited, and depositing into the account a minimum initial amount of CFAF 2.5 billion (paragraph 4.1.7); and
- (3) Provide to the Bank evidence of paying compensation to all persons affected by the first road section, the construction work of which must have started (paragraph 3.2.12).

C. Other Conditions

- (1) Provide to the Bank, latest 31 March and 30 September of each year, evidence of replenishing every six months, according to the expenditure schedule, the counterpart funds account (paragraph 4.1.7);
- (2) Provide to the Bank latest 31 January 2013, evidence of payment by the Treasury to FER2 of resources for the 2012 financial year (paragraph 4.5.6);

- (3) Provide to the Bank, latest 31 March 2012, evidence of preparing and signing a new collaboration agreement between FER2 and DGERA to improve the programming and implementation of road maintenance (paragraph 4.4.5);
- (4) Provide to the Bank, latest 31 March 2012, evidence of publishing the implementing decree of Law No. 13/2003 of 17 February 2005 to protect the national road heritage (paragraph 4.4.6);
- (5) Provide to the Bank, before the start-up of construction work of every road section, evidence of paying compensation to all persons affected by the programme (paragraph 3.2.11).

5.3 Compliance with Bank Policies

The programme is consistent with all applicable Bank policies. It is also consistent with Bank recommendations on the study of unit costs of road works.

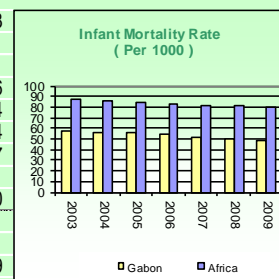
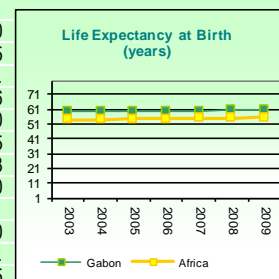
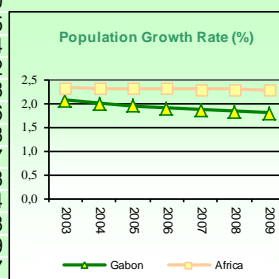
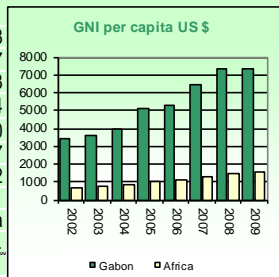
VI. RECOMMENDATION

Management recommends that the Board of Directors approve the proposal to grant a EUR 254.69 million (UA 230 million) loan to the Republic of Gabon for the purpose and subject to the conditions set forth in this report.

Gabon

COMPARATIVE SOCIO-ECONOMIC INDICATORS

	Year	Gabon	Africa	Developing Countries	Developed Countries
Basic Indicators					
Area ('000 Km ²)		268	30 323	80 976	54 658
Total Population (millions)	2010	1,5	1 031,5	5 659	1 117
Urban Population (% of Total)	2010	86,0	39,9	45,1	77,3
Population Density (per Km ²)	2010	5,6	34,0	69,9	20,4
GNI per Capita (US \$)	2009	7 370	1 525	2 968	37 990
Labor Force Participation - Total (%)	2010	48,8	40,1	61,8	60,7
Labor Force Participation - Female (%)	2010	46,9	41,0	49,1	52,2
Gender -Related Development Index Value	2007	0,748	0,433	0,694	0,911
Human Develop. Index (Rank among 169 countries)	2010	93	n.a	n.a	n.a
Popul. Living Below \$ 1 a Day (% of Population)	2005-08	4,8	42,3	25,2	...
Demographic Indicators					
Population Growth Rate - Total (%)	2010	1,8	2,3	1,3	0,6
Population Growth Rate - Urban (%)	2010	2,3	3,4	2,4	1,0
Population < 15 years (%)	2010	35,6	40,3	29,0	17,5
Population >= 65 years (%)	2010	5,1	3,8	6,0	15,4
Dependency Ratio (%)	2010	66,4	77,6	55,4	49,2
Sex Ratio (per 100 female)	2010	99,9	99,5	93,5	94,8
Female Population 15-49 years (% of total populatic	2010	25,8	24,4	49,4	50,6
Life Expectancy at Birth - Total (years)	2010	61,3	56,0	67,1	79,8
Life Expectancy at Birth - Female (years)	2010	62,5	57,1	69,1	82,7
Crude Birth Rate (per 1,000)	2010	26,6	34,2	21,4	11,8
Crude Death Rate (per 1,000)	2010	9,3	12,6	8,2	8,4
Infant Mortality Rate (per 1,000)	2010	47,2	78,6	46,9	5,8
Child Mortality Rate (per 1,000)	2010	73,3	127,2	66,5	6,9
Total Fertility Rate (per woman)	2010	3,2	4,4	2,7	1,7
Maternal Mortality Rate (per 100,000)	2008	260,0	530,2	290,0	15,2
Women Using Contraception (%)	2005-06	61,0	...
Health & Nutrition Indicators					
Physicians (per 100,000 people)	2004-09	29,0	58,3	109,5	286,0
Nurses (per 100,000 people)*	2004-09	467,3	113,3	204,0	786,5
Births attended by Trained Health Personnel (%)	2005-07	...	50,2	64,1	...
Access to Safe Water (% of Population)	2008	87,0	64,5	84,3	99,6
Access to Health Services (% of Population)	2004-09	50,2	65,4	80,0	100,0
Access to Sanitation (% of Population)	2008	33,0	41,0	53,6	99,5
Percent. of Adults (aged 15-49) Living with HIV/AIDS	2007	5,9	4,9	0,9	0,3
Incidence of Tuberculosis (per 100,000)	2009	501,0	294,9	161,0	14,0
Child Immunization Against Tuberculosis (%)	2009	71,0	79,9	81,0	95,1
Child Immunization Against Measles (%)	2009	63,0	71,1	80,7	93,0
Underweight Children (% of children under 5 years)	2005-07	...	30,9	22,4	...
Daily Calorie Supply per Capita	2007	2 755	2 465	2 675	3 285
Public Expenditure on Health (as % of GDP)	2008	4,1	5,7	2,9	7,4
Education Indicators					
Gross Enrolment Ratio (%)					
Primary School - Total	2004-09	134,3	102,7	107,2	101,3
Primary School - Female	2004-09	133,9	99,0	109,2	101,1
Secondary School - Total	2005-08	...	37,8	62,9	100,1
Secondary School - Female	2005-08	...	33,8	61,3	99,6
Primary School Female Teaching Staff (% of Total)	2004-09	44,7	47,0	60,5	81,4
Adult literacy Rate - Total (%)	2008	87,0	64,8	80,3	98,4
Adult literacy Rate - Male (%)	2008	90,9	74,0	86,0	98,7
Adult literacy Rate - Female (%)	2008	83,2	55,9	74,8	98,1
Percentage of GDP Spent on Education	2005	...	4,6	3,8	5,0
Environmental Indicators					
Land Use (Arable Land as % of Total Land Area)	2008	1,3	7,8	10,6	10,9
Annual Rate of Deforestation (%)	2005-09	...	0,7	0,4	-0,2
Annual Rate of Reforestation (%)	2005-09	...	10,9
Per Capita CO2 Emissions (metric tons)	2009	3,1	1,1	2,9	12,5



Sources : ADB Statistics Department Databases; World Bank: World Development Indicators; last update : May 2011

UNAIDS; UNSD; WHO, UNICEF, WRI, UNDP; Country Reports.

Note : n.a. : Not Applicable; ... : Data Not Available.

African Development Bank Group Portfolio in Gabon (May 2011)

Project	Approval Date	Amount Approved (UA million)	Signature Date	Effectiveness	Closing Date	Disbursement Rate	Age (Year)	Status
Sector: Transport								
1. Road Programme Phase I	12/9/2007	221.9	25/10/2007	30/9/2008	31/12/2012	36.05%	4	On-going
Sector: Agriculture								
2. Fisheries and Fish Farming Support Project	27/7/2005	14.75	28/10/2005	20/9/2006	31/12/2011	22.41%	6	On-going
3. SIAT Gabon Agricultural Expansion Project (OPSM)	12/9/2007	9.14	19/2/2008	19/2/2008	31/12/2010	100%	4	On-going
4. Study on the Development of Agricultural Production Infrastructure	1/2011	0.47	3/2011				0.5	On-going
Sector: Social								
5. Education IV Project	22/7/2009	99.30	11/3/2010	-	12/31/2015	-	2	On-going
6. National Employment and Unemployment Survey	4/6/2009	0.48	29/1/2010	29/1/2010	31/3/2011	57.34	2	On-going
7. Study on the Strengthening of CNAMGS	15/10/2010	0.5	2/2011	-	31/12/2011	-	0.75	On-going
8. Demographic and Health Survey	2/2/2011	0.5	-	-	31/12/2011	-	0.33	On-going
Sector: Community Facilities								
9. Study on the Sanitization of Three Watersheds in Libreville	10/6/2009	1.48	1/2/2010	1/2/2010	31/12/2011	-	1	On-going

Appendix III

Major Related On-going Projects in Gabon

	ROADS	LENGTH (KM)	NATURE OF WORKS	AMOUNT (in CFAF million)			FINANCING
				REPUBLIC OF GABON	TECH. AND FIN. PARTNERS	TOTAL	
1	Alembé - Lopé - Mikouyi	315	Construction	4 500	49 350	53 850	India*/Gabon
2	Rocade Nkok - PK12- Owendo Port	24	Construction	10 000	12 500	22 500	India*/Gabon
3	Lalara - Koumameyong	65	Construction	2 000	6 900	8 900	IsDB/Gabon
4	Koumameyong - Ovan	53	Construction	2 150	7 000	9 150	IsDB /Gabon
5	Akiéni - Okondja	74	Construction	1 600	7 920	9 520	IsDB
6	PK12 - Ntoum - Nsilé - Bifoun	105	Rehabilitation	16 000	16 300	32 300	Spain*/Gabon
7	Tchibanga – Mayumba	104	Construction	1 250	16 700	17 950	Italy*/Gabon
8	Cap Estérias Road	17	Construction	3 500		3 500	Gabon
9	Franceville - Boumango	90	Rehabilitation	500		500	Gabon
10	Alanga - Aboumi	65	Rehabilitation	1 000		1 000	Gabon
11	Akiéni - Onga	88	Rehabilitation	1 000		1 000	Gabon
12	Ndjolé - Medoumane	45	Construction	3 500	10 120	13 620	AFD/Gabon
13	Fougamou - Mouila	104	Construction	3 500	18 439	21 939	ADB/Gabon
14	Ndendé - Lébamba	36	Construction	1 500	11 144	12 644	ADB /Gabon
15	Lastourville - La Léyou	97	Construction	1 300	16 167	17 467	ADB /Gabon
16	RP2 (compensation for expropriation)		Construction	500	0	500	ADB /Gabon
17	Makokou - Mvadi	76	Rehabilitation	500		500	Gabon
18	Mougamou - Iboundji	54	Rehabilitation	750		750	Gabon
19	Koulamoutou - Popa	80	Rehabilitation	5 000		5 000	Gabon
20	Koumassi - Akam Essatouk	75	Rehabilitation	1 608		1 608	Gabon
21	RN1 : PK0 - PK12 (expropriation and resettlement)	12	Construction	10 000		10 000	Gabon
22	Libreville Expressway	23	Construction of works	42 000		42 000	Gabon
23	Road Improvement	59.6	Construction	10 675		10 675	Gabon
24	Moanda - Bakoumba	60	Construction	1 200		1 200	Gabon
25	PK55 - Fougamou	35	Construction	1 300		1 300	Gabon
	Total			126 833	172 540	299 373	

Source: Investment Budget 2011 (DGEI)

*: Private sector financing

MAP OF ROAD PROGRAMME II



Legend:
 LOCALITY
 Roads being built under PR1
 Roads being built under PR2

NB: The staff of the ADB Group have provided this map for the exclusive use of readers of this report to which it is appended. The appellations and the demarcations on this map do not imply any judgment on the part of the ADB Group and its members concerning either the legal status of a territory or the approval or acceptance of its boundaries.

**TECHNICAL ANNEX 1
DETAILED PROGRAMME COSTS AND EXPENDITURE SCHEDULE**

COMPONENTS	CFAF Million			UA Million		
	For. Exch.	L.C.	Total	For. Exch.	L.C.	Total
A – ROAD CONSTRUCTION						
Construction of the Ndendé-Tchibanga Road Section	45 475.00	11 368.75	56 843.75	62.6	15.66	78.26
Construction of the Mouila-Ndendé Road Section	37 450.00	9 362.50	46 812.50	51.56	12.89	64.45
Construction of the Port Gentil-Mandorové Road Section	32 640.00	8 160.00	40 800.00	44.93	11.24	56.17
Environmental Protection	144.71	36.18	180.89	0.2	0.05	0.25
Related facilities	1 615.09	403.77	2 018.87	2.22	0.56	2.78
Works Control and Supervision	5 866.24	1 466.56	7 332.80	8.08	2.02	10.1
Sensitization on STIs/AIDS, Road Safety and Environmental Protection	197.85	49.46	247.31	0.27	0.07	0.34
Construction of footbridges	58.88	14.72	73.60	0.08	0.02	0.10
Expropriation		125.22	125.22	0	0.17	0.17
B – IMPROVEMENT OF RIVER TRANSPORT						
Rehabilitation and Construction of Docks	2 800.00	700.00	3 500.00	3.86	0.96	4.82
Supply and Installation of Fixed and Floating Buoys	384.00	96.00	480.00	0.53	0.13	0.66
Environmental Protection	40.00	10.00	50.00	0.06	0.01	0.07
Works Control and Supervision	225.68	56.42	282.10	0.31	0.08	0.39
Sensitization on STIs/AIDS, River Navigation Safety and Environmental Protection	40.00	10.00	50.00	0.06	0.01	0.07
Expropriation		10.00	10.00	0	0.01	0.01
C - STUDIES						
Feasibility Study on the Lambaréné River Port	480.00	120.00	600.00	0.67	0.16	0.83
Study on the Restructuration of the Road Sector	240.00	60.00	300.00	0.33	0.08	0.41
Study on the Cost of Road Construction in Gabon	400.00	100.00	500.00	0.55	0.14	0.69
D- INSTITUTIONAL SUPPORT AND PROJECT MANAGEMENT						
Technical Assistance to MEIAT	1 635.60	408.90	2 044.50	2.25	0.56	2.81
RP2 Impact Monitoring-Assessment	132.00	33.00	165.00	0.17	0.05	0.22
Financial and Accounting Audit	64.00	16.00	80.00	0.09	0.02	0.11
Technical Audit	96.00	24.00	120.00	0.13	0.03	0.16
Running of the Executing Agency		1 372.43	1 372.43	0	1.89	1.89
BASE COST	129 985.05	34 003.91	163 988.96	178.95	46.81	225.76
Provision for Physical Contingencies	12 998.51	3 400.39	16 398.90	17.9	4.68	22.58
Provision for Price Escalation	10 425.43	2 727.28	13 152.71	14.35	3.76	18.11
TOTAL	153 408.99	40 131.58	193 540.57	211.20	55.25	266.45

Table 1.2: Programme Cost by Expenditure Category

EXPENDITURE CATEGORY	CFAF Million			UA Million		
	For. Exch.	L.C.	Total	For. Exch.	L.C.	Total
1 - GOODS						
Supply and Installation of Fixed and Floating Buoys	384.00	96.00	480.00	0.53	0.13	0.66
2 - WORKS						
Construction of the Ndendé-Tchibanga Road Section	46 318.32	11 579.58	57 897.91	63.77	15.94	79.71
Construction of the Mouila-Ndendé Road Section	38 253.20	9 563.30	47 816.51	52.66	13.17	65.83
Construction of the Port Gentil-Mandorové Road Section	32 753.28	8 188.32	40 941.60	45.09	11.28	56.37
Construction of Footbridges	58.88	14.72	73.60	0.08	0.02	0.1
Rehabilitation and Construction of Docks	2 840.00	710.00	3 550.00	3.91	0.98	4.89
3 – CONSULTANCY SERVICES						
Super of the Const of the Ndendé-Tchibanga Road Section and Sensitization	2 408.30	602.08	3 010.38	3.32	0.83	4.15
Super of the Const of the Mouila-Ndendé Road Section and Sensitization	1 984.76	496.19	2 480.95	2.73	0.68	3.41
Supervision of the Construction of the Port Gentil-Mandorové Road Section and River Docks, and Sensitization	1 936.71	484.18	2 420.89	2.67	0.67	3.34
Feasibility Study on the Lambaréné River Port	480.00	120.00	600.00	0.67	0.16	0.83
Study on the Restructuration of the Road Sector	240.00	60.00	300.00	0.33	0.08	0.41
Study on the Cost of Road Construction in Gabon	400.00	100.00	500.00	0.55	0.14	0.69
Technical Assistance to MEIAT	1 635.60	408.90	2 044.50	2.25	0.56	2.81
RP2 Impact Monitoring-Assessment	132.00	33.00	165.00	0.17	0.05	0.22
Financial and Accounting Audit	64.00	16.00	80.00	0.09	0.02	0.11
Technical Audit	96.00	24.00	120.00	0.13	0.03	0.16
4 - MISCELLANEOUS						
Running of the Executing Agency	0.00	1 372.43	1 372.43	0.00	1.89	1.89
Expropriation	0.00	135.22	135.22	0.00	0.18	0.18
BASE COST	129 985.05	34 003.91	163 988.96	178.95	46.81	225.76
Provision for Physical Contingencies	12 998.51	3 400.39	16 398.90	17.9	4.68	22.58
Provision for Price Escalation	10 425.43	2 727.28	13 152.71	14.35	3.76	18.11
TOTAL	153 408.99	40 131.58	193 540.57	211.20	55.25	266.45

RATIONALE FOR THE AMOUNT OF COUNTERPART CONTRIBUTION TO THE FINANCING OF THE ROAD PROGRAMME - PHASE II (RP2)

2.1. The proposed programme will be financed jointly by the Bank and the Gabonese Government. The Bank's contribution (UA 230 million loan) will cover 86.32% of the total programme cost, net of tax and customs duty. Government's contribution will be UA 36.45 million, or 36.45% of the programme cost.

2.2. Similar to RP1, which was approved by the Bank in 2007 and to which the Bank contributed 90% of the total cost, net of tax and customs duty, at Government's request and in accordance with Section 4.2.2 of the Policy on Expenditure Eligible for Bank Group Financing (Revised Version of 19 March 2008), the level of national counterpart contribution was determined based on the following criteria:

- (i) The country's commitment to implement its overall development programme: after a period of economic crisis coupled with a political crisis, the country has successfully embarked on a democratic transition that enabled the Government to launch the "Gabon Emergent" Strategic Plan for the 2011-2016 period in April 2010. The plan seeks to create conditions for accelerated and diversified growth, sustained and effective improvement of the people's living conditions. This focuses on three priority thrusts, namely: (i) sustained and diversified strong growth; (ii) strengthening of key factors of global competitiveness; and (iii) sharing the fruits of growth. These three priority thrusts are divided into nine strategic objectives, the sixth of which is to "modernize infrastructure and ensure harmonious regional development".
- (ii) Funds allocated by the country to the sector targeted by Bank assistance: the Road Network Development Programme (PARR) 2002-2012 is the reference framework for donor operations in the road sub-sector. CFAF 118.41 billion was effectively invested in the 2000-2005 period in tarring 318.5 km of roads, of which Government contribution of about CFAF 12.51 billion, or 10.57% of the investment. Since 2006, Government's share in PARR financing has been on the increase. In this respect, it should be noted that in 2011, the Gabonese Government will contribute 42.37% of the cost of its road investment programme (see Appendix III - Major Related Projects Being Implemented in Gabon). Thus, in recent years, the main donors involved in the transport sector (AFD and IsDB) have been financing the total cost, net of tax and customs duty, of projects to encourage Government's efforts and commitment to finance PARR and road maintenance.
- (iii) The country's budgetary position and debt level: the economic recession caused by the global financial crisis resulted in a -1.4% GDP growth rate in 2009, compared to 2.3% in 2008. To address this situation, the Government took a series of measures that helped to revive the economy. The country's macro-economic indicators improved with a 5.5% GDP growth rate in 2010 and an estimated 4.2% in 2011. Within the framework of the "Gabon Emergent" Strategic Plan, the implementation of an ambitious public investment programme and the revitalization of activities in the mining sector should help to significantly increase the fiscal balance from 0.2% of GDP in 2009 to 4.4% in 2011. According to forecasts, this trend will be consolidated

and stabilized at 4.6% in 2012. The current account balance was 13.6% of GDP in 2009 and is expected to be 16.4% of GDP in 2011 and 16.6% in 2012. Gabon's macro-economic indicators are summarized in Table 2.1 below.

Table 2.1: Gabon's Macro-economic Indicators

	2009	2010	2011	2012
GDP Growth	-1.4	5.5	4.2	4.9
Inflation	1.9	3.2	2.7	2.7
Fiscal Balance (GDP %)	0.2	3.7	4.4	4.6
Current Account Balance (GDP %)	13.6	14.3	16.4	16.6

As a result of these efforts, the Bank re-evaluated the country's risk rating from 4 on the old scale (1-10) to 3+ in March 2010 on the new scale (1-22).

2.3 Although the efforts made by Gabon have begun to bear fruit, the situation remains fragile and donor assistance is still essential to the country. Therefore, it has been proposed that the counterpart contribution be limited to 13.68% of the total programme cost, net of tax, to partly finance road construction and buoying, and the entire expropriation and operating cost of the Executing Agency.

PROCUREMENT OF GOODS, WORKS AND SERVICES

The various procurement methods and contract amounts under the programme are summarized in Table 3.1 below.

Table 3.1: Summary of Procurement Methods

EXPENDITURE CATEGORIES	ICB	Others ^a	Shortlist	Other than ADB ^b	Total
1 - GOODS					
1.1 Supply and Installation of Fixed and Floating Buoys	0.66 [0.59]				0.66 [0.59]
Total 1	0.66 [0.59]				0.66 [0.59]
2 - WORKS					
2.1 Ndendé-Tchibanga Road Section	79.71 [68.58]				79.71 [68.58]
2.2 Mouila-Ndendé Road Section	65.83 [56.64]				65.83 [56.64]
2.3 Port Gentil-Mandorové (PG-MDV) Road Section and River Docks	61.26 [52.84]				61.26 [52.84]
2.4 Construction of Footbridges		0.10 [0.10]			0.10 [0.10]
Total 2	206.80 [178.06]	0.10 0.10			206.90 [178.16]
3 – CONSULTANCY SERVICES					
3.1 Supervision of the Construction of the Ndendé-Tchibanga Road Section and Sensitization			4.15 [4.15]		4.15 [4.15]
3.2 Supervision of the Construction of the Mouila-Ndendé Road Section and Sensitization			3.41 [3.41]		3.41 [3.41]
3.3 Supervision of the Construction of the PG-MDV Road Section and River Docks, and Sensitization			3.34 [3.34]		3.34 [3.34]
3.4 Feasibility Study on the Lambaréné River Port			0.83 [0.83]		0.83 [0.83]
3.5 Study on the Restructuration of the Road Sector			0.41 [0.41]		0.41 [0.41]
3.6 Study on the Cost of Road Construction in Gabon			0.69 [0.69]		0.69 [0.69]
3.7 Technical Assistance to MEIAT			2.81 [2.81]		2.81 [2.81]
3.8 RP2 Impact Monitoring-Assessment		0.22 [0.22]			0.22 [0.22]
3.9 Financial and Accounting Audit			0.11 [0.11]		0.11 [0.11]
3.10 Technical Audit			0.16 [0.16]		0.16 [0.16]
Total 3		0.22 [0.22]	15.91 [15.91]		16.13 [16.13]
4 - MISCELLANEOUS					
4.1 Running of the Executing Agency				1.89	1.89
4.2 Expropriation				0.18	0.18
Total 4				2.07	2.07
Base Cost	207.46 [178.65]	0.32 [0.32]	15.91 [15.91]	2.08	225.76 [194.88]
Provision for Physical Contingencies	20.75 [17.86]	0.03 [0.03]	1.59 [1.59]	0.21	22.58 [19.49]
Provision for Price Escalation	16.64 [14.33]	0.02 [0.02]	1.28 [1.28]	0.17	18.11 [15.63]
Total	244.85 [210.84]	0.37 [0.37]	18.78 [18.78]	2.45	266.45 [230.00]

Key

[]: Bank's contribution;

(a): Direct negotiations with Helvetas for the construction of footbridges and with the DGS for monitoring/evaluation;

(b): Procurement using to national procedures.

Goods

Buoys equipment for UA 0.66 million will be procured through international competitive bidding (ICB).

Works

The procurement of road, dock and related works will be done by international competitive bidding (ICB). Since the aforementioned works, as with on-going works under RP1, are not particularly complicated, contractors will not be shortlisted. The works worth a total UA 206.80 million will be broken down into three contracts as follows:

- (i) Ndendé-Tchibanga road section for UA 79.71 million: single batch;
- (ii) Mouila-Ndendé road section for UA 65.83 million: single batch;
- (iii) Port-Gentil Mandorové road section for UA 61.26 million: 2 batches:

- Batch 1 – Port Gentil-Mandorové; and

- Batch 2 – River docks.

The contract to construct two pilot footbridges for UA 0.10 million within the framework of a sector study launched by OITC will be awarded to the NGO, Helvetas Ethiopia. The “single tender” selection method was adopted because Helvetas has developed a unique technology for the construction of suspension footbridges and has built similar structures in Ethiopia. It will assist local communities in building this type of structures, train them and assist the country in setting national standards in this area.

Consultancy Services

The procurement of consultancy services for: (i) the control and supervision of the construction of the Ndendé-Tchibanga road section, and the sensitization of the population of the PDIA for UA 4.15 million; (ii) the control and supervision of the construction of the Mouila-Ndendé road section and the sensitization of the population of the PDIA for UA 3.42 million; (iii) the control and supervision of the construction of the Port Gentil-Mandorové road section and river docks, and the sensitization of the population of the PDIA for UA 3.34 million; (iv) the feasibility study on the Lambaréné River Port for UA 0.83 million; (v) the study on the restructuring of the road sector for UA 0.41 million; (vi) the study on the cost of road construction in Gabon for UA 0.69 million; (vii) technical assistance to MEIAT for UA 2.81 million; and (viii) technical audit for UA 0.17 million will be done by prudent shopping based on shortlists; consultants will be selected using the quality and cost-based method (QCBM). The procurement of consultancy services for auditing programme accounts for UA 0.11 million will be done through prudent shopping, based on shortlists and the least-cost selection method (LCSM).

Monitoring/Evaluation

The “single tender” selection method was adopted for conduct by the General Directorate of Statistics (DGS) of: (i) the study on the establishment of the baseline case; and (ii) the study on programme impact assessment for impact monitoring purposes. The choice of this selection method is consistent with Clause 3.10 of the Bank’s Rules of Procedure for the Use of Consultants (May 2008 Edition). The DGS is the only national institution responsible for producing and disseminating national statistics, in particular monitoring production and price trends; conducting sector and regional studies; conducting studies on household living conditions and on poverty, preparing foreign trade statistics and conducting population censuses; and preparing national accounts. It had similar mandates with other agencies: UNFPA, UNICEF, the World Bank, French Cooperation, etc. The studies it has carried out include: Supplementary Informal Sector Survey 2009 (ECSI 09), Census of Economically Weak Gabonese in 2008 (RGEF 08), Gabonese Survey on Poverty Evaluation and Monitoring 2005 (EGEP 05), Household Expenditure Survey 2003 (EDM 03), and General Population and Housing Census 2003 (RGPH 03). The contract awarded to the DGS is also a means for the Bank to contribute to building the capacity of this Institution in road project impact assessment.

Review Process

The following documents will be submitted to the Bank for review and approval before publication: General Procurement Notice (GPN), Specific Tender Notice, bidding documents or requests for proposals from consultants, report on bid evaluation for works, evaluation of

technical proposals from consultants, report on combined evaluation of technical and financial proposals, including recommendations for the award of contracts, and draft contracts with negotiation minutes.

Executing Agency

MEIAT will be responsible for the procurement of goods, works and consultancy services. It will receive support from technical assistance in procurement and monitoring the implementation of programme components.

Procurement Plan

The Bank will review the procurement measures taken by the Borrower under the procurement plan to ensure compliance with the loan agreement and its Procurement Rules. The original procurement plan will cover the project period. The Borrower will update the plan every year or as and when necessary, but always every 18 months during the project implementation period. Any proposal to revise the procurement plan will be submitted to the Bank for approval.

National Laws and Regulations

Procurements of office supplies, consumables, computer hardware, office automation equipment as well as vehicles for the running of the executing agency during programme implementation, fully financed by the national counterpart contribution, will be done according to national procedures. All procurement of works and services financed with Bank resources under this programme will be undertaken in accordance with Bank Rules of Procedure for Procurement of Goods, Works and Services (May 2008 edition), using the Bank's standard bidding documents.

**TECHNICAL ANNEX 4
ECONOMIC AND FINANCIAL ANALYSIS**

5.1 HDM Input Data

The HDM model used for various degradation simulations by type of pavement include an HDM VOC (Vehicle Operating Cost) model that enables the auto-generation of the operating costs of reference vehicles chosen based on the specifications of such vehicle types, road geometric features and the evolution of its surface condition. The values used are indicated in the table below (in CFAF thousand).

Table 4.1: Input Data for Various Types of Vehicles Used

Description	Basic Type	New Vehicle	Tyre	Fuel (/litre)	Oil (/litre)	Labour (/h)	Crew (/h)	Overheads (/year)	Immob. March. (h)
1. Private vehicles	Average vehicle	29 945	45	0.40	2.50	2.73	3.30	300	0.20
2. Private taxis	Average vehicle	29 945	45	0.35	3.98	3.35	3.26	400	0.20
3. LDV/Pick-up truck	LDV for goods	19 487	78	0.35	3.98	3.25	3.30	500	0.50
4. Twenty-seater minibus	Light bus	29 212	58	0.35	3.98	3.25	4.70	600	0.50
5. Forty-seater bus	Average Bus	116 775	247	0.35	3.98	3.25	5.30	750	0.50
6. Two-axle truck	Average truck	43 453	260	0.35	3.98	3.25	6.70	950	1.00
7. Three-axle truck	Heavy truck	81 743	356	0.35	3.98	3.25	13.40	1 200	1.20
8. Articulated vehicles	Articulated truck	116 555	356	0.35	3.98	3.25	13.40	1 750	2.00

5.2 Traffic Data

5.2.1 Traffic on Road Sections to be Constructed

The normal traffic assumption (Annual Average Daily Traffic) stems from traffic audits carried out in April 2009, studies conducted and missions fielded by the Bank from July to August 2010. The induced traffic was estimated at 20% of normal traffic on average, similar to other road rehabilitation studies. The normal volume of traffic adopted in 2011 varies between 222 and 1 881 vehicles per day, of which 13% to 16% heavy-duty vehicles. Traffic forecasts calculated based on projections from past trends give a 3.75% average growth rate for light-duty vehicles and 3.30% for heavy-duty vehicles throughout the programme lifespan.

5.2.2 Traffic Diverted to the Port Gentil-Mandorové Road Section

Traffic diverted to the Port Gentil-Mandorové road section after its construction will comprise mainly the current traffic of dugout canoes transporting goods and persons within this isolated area. For now, the movement of goods and persons between Port Gentil and Mandorové and beyond in the project area is mainly by river transport. Given that this road section is unmotorable, the economic costs borne by passengers are CFAF 10 199 and CFAF 40 033, respectively, for private vehicles and pick-up trucks, compared to CFAF 4 765 and CFAF 23 790 through river transport using dugout canoes on the Port Gentil-Mandorové route. The general costs of using the current road are therefore 1.8 to 2.1 times higher than that of dugout canoes.

In the with-project situation, the general costs borne by passengers for using the Port Gentil-Mandorové route are CFAF 3 050 and CFAF 7 425, respectively, for private vehicles and pick-up trucks, against CFAF 4 765 and CFAF 23 790 for using the waterway by dugout canoes in the current situation. Thus, the general costs of using the road by private vehicles and pick-up trucks are therefore 1.6 to 3.2 times less in the with-project situation than that of using dugout canoes in the current situation. The diversion of current traffic by waterway to the project road will be done by transferring passengers and goods to various categories of road vehicles. Passenger traffic will mainly be distributed between private vehicles and minibuses. Goods traffic will be handled mainly by pick-up trucks. Based on the assumptions presented above, the traffic diverted to the project road is estimated at 153 vehicles per day. The following tables summarize the estimates of traffic diverted to the project road.

Table 4.2: Estimate of Passenger Transport Vehicles Diverted to the Port Gentil-Mandorové Road

	Private Vehicles	Minibuses	TOTAL
Percentage of passengers transported on inter-urban roads	15%	85%	100%
Number of passengers to be transported	170	960	1 130
Average number of passengers/vehicles in the inter-urban area	3	10	-
Traffic diverted to the project road	57	96	153

Table 4.3: Estimates of Goods Transport Vehicles Diverted to the Port Gentil-Mandorové Road

	Vans
Quantity of goods to be transported (in tons)	72
Average vehicle load factor with a gross weight of 11.5 tons	62.5%
Traffic diverted to the project road	10

Multimodal, river and land transport modes are a reality in Ogooué Maritime Province. These modes of transport enable the isolated populations to cope with the constraints of an undeveloped road network. The diversion of traffic from river transport to the Port Gentil-Mandorové road will benefit from improved conditions of safety and efficiency, thanks to related facilities financed under this programme. Under the RP2, five (5) river docks will be rehabilitated and constructed at Mandorové, Omboué, Ngoumbi, Achouka and Ndjolé because these remote localities served by the CNI and dugout canoes do not have adequate infrastructure to load and offload goods and passengers. Given the high number of incidents and accidents on waterways, there are also plans to improve inland navigation safety through the supply and installation of buoys on River Ogooué.

5.3 Exogenous Benefits of the Primary Sector

The induced exogenous benefits of the project concern notably reduced agricultural production losses as well as the production and processing of primary products, particularly those of the timber sector. Improved road conditions should enable the issuance of permits for exploiting forests in the programme area.

Concerning agricultural production losses, programme implementation will enable producers to avoid losses caused by the prevailing condition of programme roads. The improved state of the road would enable the sale of quantities produced, generating net income for farmers.

Data from forestry services helped to calculate the additional value added of the production of undressed timber and the timber processing industry. Gabon's total commercial timber potential

is estimated at 400 million m³, or 1 739 m³/km² of forest, that is to say 1 278 tons/km², with an average timber density of 0.735 T/m³. The domestic production of logs in Gabon over the period 2000-2004 represented an average of 0.8% of the marketable potential. Although forests occupy most of the land, the processing industry in Gabon was not sufficiently developed in the past. The programme area accounts for 1.25% of Gabon's total commercial timber potential.

The current strategy adopted to develop the timber sector is based mainly on four thrusts: (i) consolidating conditions for sustainable forest management; (ii) sensitizing the population on the rational exploitation of timber, particularly through collective interest support actions and the development of "community" forests; (iii) redefining forest industry training programmes; and (iv) exempting local investors involved in the processing of timber from taxes.

It is envisaged that by 2016, four million cubic metres of timber will be exploited in the programme area and that the total value added derived from the exploitation of forest concessions will be about CFAF 13 billion.

Value added for logs in 2011	CFAF 168 000 /m ³
Total value added for logs in 2016	CFAF 13 075 million
Total value added for logs in 2021	CFAF 15 158 million

With the construction of the road, the production of logs and processed timber should increase rapidly. The rate of local processing of timber today is 45%. It is expected to increase to 55% by 2015 and to 65% by 2020. The additional value added for the sector is estimated as follows:

Value added from processing in 2011	CFAF 203 000/m ³
Total value added from processing in 2016	CFAF 6 392 million
Total value added from processing in 2021	CFAF 7 554 million

Besides the benefit from the timber sector, the project will bring about socio-economic benefits difficult to quantify in economic terms, such as better access by the population in the PDIA to social, health and administrative facilities, improved logistic framework for agricultural produce and reduced rural-urban migration. This positive aspect of the programme was not quantified because it requires an in-depth socio-economic study.

5.4. Economic Evaluation

Economic analysis was carried out using the HDM4 model through a cost-benefit analysis of the without- and with-programme situations over 20 years after commissioning. A 12% discount rate and a 30% residual value were adopted. The costs considered are investment (cost of works execution and control, net of taxes, including provision for physical contingencies), vehicle maintenance and operating costs. Benefits concern the reduction of overall transport costs (including time gains) and value added of the primary sector, particularly value added owing to an increase in the share of the primary processing of timber. The investment costs of related infrastructure: rural roads, river docks and agricultural produce processing equipment) and the cost of compensation for persons affected by the programme were included in the costs. The following table summarizes the outcome of the economic evaluation.

Table 4.4: Economic Evaluation (in CFAF million)

Year	Additional Economic Costs			Economic Benefits				Balance
	Investments	Maintenance and Repair Cost	Total	Operating Cost Benefits	Economy of Time	External Benefits	Total	
2011	0.00	-2.048.70	-2048.7	0.00	0.00	0.00	0.0	2048.7
2012	0.00	-2.169.48	-2169.5	-563.73	-193.93	0.00	-757.7	1411.8
2013	46.410.99	-2.169.48	44.241.5	-688.93	-321.47	0.00	-1010.4	-45.251.9
2014	61.881.32	-2.300.59	59.580.7	-231.83	-36.47	0.00	-268.3	-59.849.0
2015	44.579.67	-2.184.89	42.394.8	-408.91	-167.60	0.00	-576.5	-42.971.3
2016	0.00	-461.21	-461.2	17.035.99	4.634.58	19.466.97	41.137.5	41.598.7
2017	0.00	-461.21	-461.2	19.247.08	5.211.01	20.050.98	44.509.1	44.970.3
2018	0.00	-696.81	-696.8	20.671.11	5.794.02	20.652.51	47.117.6	47.814.5
2019	0.00	-696.81	-696.8	21.653.87	6.199.32	21.272.08	49.125.3	49.822.1
2020	-1.831.32	-345.51	-2.176.8	22.277.67	6.403.79	21.910.24	50.591.7	52.768.5
2021	0.00	-952.56	-952.6	19.154.37	5.053.64	22.711.64	46.919.7	47.872.2
2022	0.00	-952.56	-952.6	21.789.53	5.831.63	23.392.99	51.014.2	51.966.7
2023	0.00	-952.56	-952.6	23.495.64	6.562.49	24.094.78	54.152.9	55.105.5
2024	0.00	-952.56	-952.6	24.540.01	6.956.08	24.817.63	56.313.7	57.266.3
2025	-1.831.32	-345.52	-2.176.8	25.254.58	7.159.37	25.562.15	57.976.1	60.152.9
2026	0.00	-952.56	-952.6	22.118.82	5.712.83	26.329.02	54.160.7	55.113.2
2027	30.597.42	-952.56	29.644.9	25.250.73	6.747.32	27.118.89	59.116.9	29.472.1
2028	0.00	-952.56	-952.6	27.218.06	7.605.33	27.932.46	62.755.9	63.708.4
2029	0.00	-952.56	-952.6	28.534.63	8.109.46	28.770.43	65.414.5	66.367.1
2030	-1.831.32	-345.54	-2.176.9	29.467.79	8.383.93	29.633.54	67.485.3	69.662.1
2031	0.00	-952.56	-952.6	30.400.96	7.417.43	30.522.55	68.340.9	69.293.5
2032	0.00	-952.56	-952.6	31.334.12	8.447.39	31.438.23	71.219.7	72.172.3
2033	0.00	-952.56	-952.6	32.267.28	9.113.68	32.381.37	73.762.3	74.714.9
2034	0.00	-952.56	-952.6	33.200.44	9.599.17	33.352.81	76.152.4	77.105.0
2035	-45.861.59	-952.56	-46.814.2	34.011.51	9.702.93	34.353.40	78.067.8	124.882.0
							NPV	133.261.1
							EIRR	26.45%

5.5. Sensitivity Analysis

Table 4.5: Sensitivity Analysis

Situation	EIRR
Base	26.45%
10% increase in costs	24.59%
10% reduction in benefits	24.40%
10% reduction in benefits and 10% increase in costs	22.65%