

AFRICAN DEVELOPMENT FUND



**PROJECT: EASTERN CORRIDOR ROAD DEVELOPMENT
PROGRAMME - PHASE 1**

COUNTRY: GHANA

PROJECT APPRAISAL REPORT

RDGW/PICU/COGH

June 2019

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Currency Equivalents

April 2019

UA 1 = 1.4007 USD
 UA 1 = 6.9343 GHS
 USD 1 = 4.9509 GHS

Fiscal Year

January 1 – December 31

Weights and Measures

1 metric ton = 2204 pounds
 1 metre (m) = 3.28 feet
 1 millimetre (mm) = 0.03937 inch
 1 kilometre (km) = 0.62 mile
 1 hectare (ha) = 2.471 acres

Acronyms and Abbreviations

AADT	Annual Average Daily Traffic	GRF	Ghana Road Fund
AfDB	African Development Bank	GWCL	Ghana Water Company Limited
ADF	African Development Fund	HDM	Highway Development Model
AFD	Agence Française de Développement	ICB	International Competitive Bidding
AIDS	Acquired Immune Deficiency Syndrome	JICA	Japan International Cooperation Agency
APA	Advance Procurement Action	KOICA	Korea International Cooperation Agency
ARDP	Arterial Road Development Programme	MCC	Millennium Challenge Corporation
BECE	Basic Education Certificate Examination	MLGRD	Ministry of Local Government and Rural
BRT	Bus Rapid Transit	MoF	Ministry of Finance
BOQ	Bill of Quantities	MRH	Ministry of Roads and Highways
CBD	Central Business District (Accra)	NCB	National Competitive Bidding
DFR	Department of Feeder Roads	NMT	Non-Motorised Traffic
DPs	Development Partners	NRSC	National Road Safety Commission
DUR	Department of Urban Roads	OFID	OPEC Fund for International Development
E&S	Environment and Social	PA	Per Annum
ECOWAS	Economic Community of West African States	PAR	Project Appraisal Report
EIRR	Economic Internal Rate of Return	PBA	Point Based Allocation
EPA	Environmental Protection Agency	PIM	Project Implementation Manual
ESAL	Equivalent Standard Axle Load	PCN	Project Concept Note
ESIA	Environmental and Social Impact Assessment	PCU	Project Coordination Unit
ESMP	Environmental and Social Management Plan	SCPZ	Staple Commodities Processing Zones
EU	The Commission of European Union	SECO	State Secretariat for Economic Affairs (Switzerland)
GAMA	Greater Accra Metropolitan Area	TCP	Department of Town and Country Planning
FYRR	First Year Rate of Return	TSDP	Transport Sector Development Programme
GDP	Gross Domestic Product	TSWG	Transport Sector Working Group
GER	Gross Enrollment Rate	UA	Unit of Account
GEPA	Ghana Environmental Protection Agency	UNOPS	United Nations Office for Project Services
GHA	Ghana Highway Authority	VOC	Vehicle Operating Costs
GHS	Ghana Cedi (new)	WB	World Bank
GoG	Government of Ghana		

PROJECT INFORMATION SHEET

Client Information

Borrower: REPUBLIC OF GHANA
Executing Agencies: GHANA HIGHWAY AUTHORITY (GHA)

Financing Plan

Source	USD (million)	UA (million)	GHS (million)	% of Total
AfDB	81.67	58.30	404.30	72%
OFID	20.00	14.29	99.10	18%
GoG (net)	6.60	4.72	32.80	6%
Project Cost (net of taxes)	108.27	77.31	536.20	100%
Taxes	5.00	3.60	25.00	4%
GoG (incl taxes)	11.60	8.32	57.80	10%
Total with Taxes	113.27	80.91	561.20	100%
Exchange Rate Feb 2019 UA1.00 = \$ 1.4007 GHS 6.9343				

Key African Development Bank (AfDB) Financial Information

ADF Loan Financing Terms

Loan currency	Unit of Account (UA)
Interest type	fixed
Interest rate	1%
Commitment fee	50 bps of the undisbursed loan amount 120 days following signature of the Loan Agreement
Other fees*	service charge - 75bps on amount disbursed and outstanding
Tenor	30 years
Grace period	5 years
NPV (base case)	USD29.18 million
EIRR (base case)	18.77%

OFID Loan Financing Terms

Loan currency	USD
Interest rate	175bps
Commitment fee	N/A
Other fees*	service charge - 100bps
Tenor	20 years
Grace period	5 years
Board Presentation	12 th June 2019

Duration – Processing Milestones

ACTIVITIES	(MONTH, YEAR)
Approval of the concept note	October 2018
Project Appraisal	March 2019
Posting of ESIA/ RAP Summaries	February 2019
Project approval	26 th June 2019
Effectiveness	December 2019
Completion date	June 2024
Closing date	December 2024

PROJECT SUMMARY

General Overview of Project

- 1) The Transport Sector in Ghana has been providing efficient transportation services that serve as a catalyst for economic growth anchoring on its vision to provide “an integrated, efficient, cost-effective and sustainable transportation system responsive to the needs of society, supporting growth and poverty reduction and capable of establishing and maintaining Ghana as a transportation hub of West Africa”. The Eastern Corridor along which this project is located is defined as National Road - N2 - approximately 695km and one of three north-south corridors (Eastern, Central and Western corridors) in the country, linking the southern coastal seaports to the hinterland and landlocked neighbours in the north. It is a strategic alternative route to the main Central Corridor, shorter route by almost 200km and does not have as many bottle-necks such as major urbanised towns. This makes it a much safer and economical link especially for transit trade. It is also a multi-modal corridor with several sections either recently completed or being considered for construction. These include: i) current expansion of the container terminal at Tema Port through MPS Concessional financing; ii) current construction of a grade separated interchange at Tema roundabout through Japanese (JICA) funding; iii) ongoing construction of the Tema – Akosombo rail line through India-Exim financing; iv) ongoing studies and dredging interventions to revive the lake Volta transport through World Bank funding; v) various sections of the road corridor completed or being prepared for construction financed by the EU, the Governments of Brazil, China and Government of Ghana.
- 2) The overall Eastern Corridor Programme entails development of the Eastern Corridor route including 3 road sections – sections 1,3 and 4 and a bridge on section 2. Phase 1 of the programme will include construction of the bridge in section 2 and road sections 3 and 4 and related works in addition to consultancy services, institutional support, hard and soft community support and studies to support agriculture and facilitate trade. Subsequent phases will include section 1 and other road sections along the Eastern Corridor route.
- 3) This proposed project is expected to be financed by the Bank, OFID and GoG and parallel financed with JICA. The JICA loan of USD100 million as parallel finance for the bridge construction in Section 2 has already been secured by GoG and procurement for the Bridge Works is currently ongoing. Total project cost for the Eastern Corridor Road Development Programme (Phase 1) co-financed by the Bank, OFID and GoG is USD113.55 million or UA81.09 million. OFID loan of USD20 million will exclusively co-finance the road works (18%) with the Bank whilst GoG counterpart contribution of USD11.60million will cover RAP & ESMP, Operations costs of the Project Coordination Unit and taxes (10%); the Bank’s funding from ADF14 allocation of UA58.50 million equivalent to USD81.95 million (72%) will cover all the remaining activities including co-financing the road works with OFID.

Project Rationale

- 4) The rationale for the Bank’s intervention is driven by the need for an alternative north-south corridor linking the port of Tema to the northern parts of the country and across the borders to Ghana’s landlocked neighbours whilst contributing towards an efficient multi-modal transportation system that promotes Ghana’s ports and corridors to enhance inclusiveness, stimulate socio-economic development and facilitate domestic and regional trade and integration. This is fully in line with the Bank’s development goals and in particular three of the High five priorities - Feed Africa, Integrate Africa and Improve the Quality of Lives of the people of Africa respectively.

Needs Assessment

- 5) The volume of transit cargo passing through Ghana (1,132,672mt in 2018) to its landlocked neighbouring countries has been increasing in the recent past and whilst GoG is taking proactive steps to help improve and facilitate trade through Ghana, the bottlenecks still exist. The Central Corridor is currently the only functional north-south corridor which links the capital city Accra and

coastal Port of Tema to the northern hinterland. It is however constrained by chronic congestion and deteriorating road conditions especially within and around the main cities (Accra and Kumasi in particular) along the Central Corridor, which poses a great strain and delays in movement of people and freight. GoG has therefore identified alternative routes with the main one being the Eastern Corridor (N2) to also serve as a trade and transit corridor to the north. The Eastern Corridor has a substantial portion of unpaved road sections with ageing bridges and often experiences washouts and damages during the rainy season. GoG has put a high priority on developing this corridor under the Transport Sector Medium-Term Development Plan (2018-2021) and is actively promoting its development. More than half of this corridor is under construction with various sections funded by DPs and GoG.

- 6) Road sections 3 and 4 covered under Phase 1 of this project, traverse an area renowned for its production of cassava, rice, corn, tomatoes as well as other cash and food crops for consumption and exports. Due to the bad roads, access to markets for agricultural products and farmers access to inputs for enhanced productivity becomes impossible. Communities along the route are usually cut-off from the remaining parts of the country during heavy rains thereby resulting in persistent outcry by the local population living along this route. Rehabilitation of these roads, if delayed, shall result in the total collapse of a significant part of the regional road network thereby raising consequent capital cost for rehabilitation and its associated adverse social effects.

Value-added for the Bank

- 7) The Bank being the lead DP in the Transport Sector Working Group will leverage its position to mobilise resources and contribute towards collective efforts being made by GoG and DPs to operationalise the Eastern Corridor as an alternative multi-modal transport route. In addition to the road infrastructure, the Bank's approach on regional integration and trade facilitation assures complementarity between hard and soft infrastructure interventions, and ensures these initiatives are implemented in tandem. The project has also made deliberate efforts to integrate and mainstream community support within the project area. The interventions identified were arrived at following series of interactive consultations during preparation and appraisal with the impacted communities. Support to enhance the livelihoods of women and the youth in particular include entrepreneurship and vocational trainings as well as artisanal and auto related skills trainings, provision of centres for agro-industries, provision of road side markets and rehabilitation of health and educational facilities to create sustainable jobs. The project also includes feasibility and detailed design studies for water and sanitation to provide a comprehensive plan to address water supply needs of the communities particularly women within the project area. The study findings shall be translated into a full water and sanitation project to be considered under Phase 2. The roads under this project which contributes to the 695km stretch of Eastern Corridor Road avails opportunities for the setting of Staple Commodities Processing Zones (SCPZs). The project also includes a study to explore SCPZs at high agricultural production areas along the entire corridor whose recommendations would form part of interventions under Phase 2.

Knowledge Management

- 8) The project covers several knowledge products including various studies, Economic Sector Work (ESW) and a comprehensive study to explore agro-based economic activities along the Eastern Corridor that could be optimized using the SCPZs (or Industrial Park) approach of the Bank and Ministry of Trade and Industry to identify Zones that build upon the transportation network to attract private investors in agri-business. The Project also includes dedicated monitoring and evaluation of the project's interventions such as baseline studies and monitoring of project's impact over the life of the project. These would be accompanied with video documentary incorporating footage of each phase of the project execution to fully capture the transformation of the area through this project intervention.

- 9) The multi-sectoral project design which anchors on a road infrastructure project is intended to replicate the Fufulso-Sawla Project model to provide series of interventions that meets the needs of users and communities within the project area and maximise developmental impact whilst serving as a catalyst for private sector investment.

Results-Based Logical Framework of the Project

Country and project name: GHANA – Eastern Corridor Road Development Programme (Phase 1)

Purpose of the project: contribute towards an efficient transportation system that promotes Ghana's ports and corridors to enhance inclusiveness, stimulate socio-economic development and facilitate domestic and regional trade and integration

RESULTS CHAIN		PERFORMANCE INDICATORS			MEANS OF VERIFICATION	RISKS/ MITIGATION MEASURES
		Indicator (including CSI)	Baseline	Target		
IMPACT	1.1 Contribute towards economic growth	1.1 GDP annual growth	1.1 6.3%	1.1 7.5%	GoG records	Risks 1) Delays to start of project; 2) Delays in compensation payment and resettlement; 3) Delays in commencing parallel financed components; 4) Cost overrun and implementation delays.
	1.2 Enhance regional trade and integration	1.2 Vol. of transit trade passed through Ghana	1.2 1,132,672 mt 2018	1.2 increase by 10% 2024		
OUTCOMES	1.1 Enhanced travel along the Eastern Corridor	1.1 i) Reduced Transport costs (VOC); ii) reduce avrg. journey time from Tema to Asikuma Junction at peak times (hrs);	1.1 i) GHS/ veh.km; ii) 2.5 hrs	1.1 i) Reduced by 50%; ii) reduced by 1hr	Data from Local Agencies and Authorities; GoG records Ministry of Education, EMIS data Ministry of Health DHS/DHIMS	5) Incomplete support and lack of follow up on the trained youth and women could limit the effectiveness of the vocational skills / entrepreneurship training Mitigating Measures 1) Advanced procurement to reduce project start delays; 2) Delays in RAP implementation will be
	1.2 Reduced road accidents within the project area of influence;	1.2 Traffic accidents and mortality within the project area of influence (no./yr)	1.2 200/yr	1.2 Reduced by 40%		
OUTCOMES	1.3 Support to enhance basic social service delivery in education and health in : Shai-Osudoku, North Tongu, and Ho West Districts	1.3 i) Increased access to basic education; ii) No of jobs created for women and youth; iii) No. of latrines rehabilitated in schools and health care centers;	1.3 i) Gross Enrolment Ratio (GER) -79% in schools; ii) 0 (0% women); iii) 0.	1.3 i) GER-81% in 15 schools; ii) 1,500 direct (30% women) and 850 indirect jobs of which 500 is the youth; iii) 15 No.		
	1.4 Increase in value added agricultural products and exports	1.4 i) % increase in vol. of livestock and products marketed; ii) % increase in vol. of fresh fruits and vegetables exported by women; iii) % increase in No. of MSMEs of which at least 30% of women owned businesses established within the Project corridor	1.4 i) 0%; ii) 0%; iii) 0%	1.4 i) 20%; ii) 10%; iii) 20%		
OUTCOMES	1.5 Efficiency and improvements in transit trade along the Eastern Corridor	1.5 Reduced transit time for goods passed through Ghana destined for Burkina Faso and beyond	1.5 15 days 2019	1.5 40% reduction in transit time 2024		

KEY ACTIVITIES	OUTPUTS	<p>2.1 Main road infrastructure built and related activities completed</p> <p>2.2 All Consultancy Service activities completed</p> <p>2.3 Institutional Support to PCU and AfDB Desk provided</p> <p>2.4 Community support initiatives provided</p> <p>2.5 Soft interventions to support trade and regional integration provided</p>	<p>2.1) i) Length (km) of road constructed; ii) No. PAPs compensated and/or resettled in accordance with the RAP iii) No of women benefiting from the compensation and/or resettled</p> <p>2.2) i) Design Review Report and works supervision reports submitted; ii) No of Audit reports submitted; iii) No of sensitization campaigns (gender) conducted; iv) No of road studies completed; vi) Staple Crop Processing Zone Report completed; vii) Feasibility and DD study for water and sanitation within project area completed; viii) No. of M&E reports submitted; ix) project video documentary submitted</p> <p>2.3) i) No. of TAs provided to the PCU; ii) No of I.T Equipment and Vehicles provided; iii) PCU and AfDB Desk personnel women/men trained ; iv) ESW report completed; v) Transport Sector Conference held</p> <p>2.4) i) No of Common User Bulking / Processing Facilities Constructed; ii) No. of people trained (disagg. by gender, age); iii) No. of youth (gender) benefitting from Labour Intensive Public Works) LIPU; iv) No of schools rehabilitated and equipped with IT; v) No of Health Facilities rehabilitated; vi) No of markets provided; vii) No of women beneficiaries of stores in the markets</p> <p>2.5) i) implement efficient business process flow at Tema Port; ii) No. of customs officials trained on transit procedures and regulations; ii) No. of policies and regulations harmonized and implemented along the corridor</p>	<p>2.1) i) 0 km; ii) 0 PAPs; iii) 0 women</p> <p>2.2) 0</p> <p>2.3) 0</p> <p>2.4) 0</p> <p>2.5) 0</p> <p>2019</p>	<p>2.1) i) Section 3 (39.2km) & 2 x interchanges & Section 4 (23.9km) completed; ii) 1,454 PAPs; iii)</p> <p>2.2) i) 1 design review report; 10 supervision reports; ii) 3 road safety audit reports; 1 procurement audit report; 3 financial audit reports; 3 technical audit reports; 3 road studies completed; 1 Staple Crop Processing Zone Report completed; Feasibility and DD Report for Water & Sanitation completed; 3 M&E reports submitted; 1 video documentary submitted</p> <p>2.3) i) 3TAs to the PCU; ii) 3xPrados / 2xV8 / 2xpickup / 1 saloon; 8 computers provided; iii) 12 personnel trained (40% women); iv) 1 ESW completed and iv) 1 transport conference held</p> <p>2.4) i) 3 common user bulking / processing facilities; ii) 1,500 (30% women); iii) 500 youth (40% women); iv) 15 schools; v) 6 Health centres; vi) 3 markets; 200 women</p> <p>2.5) i) 5 days turnaround time for cargo processing at Tema; ii) 50 customs officials trained; iii) No. of Policies and regulations (5 minimum) harmonized and under implementation</p> <p>(2023)</p>	<p>Bank supervision mission reports</p> <p>Project quarterly and completion reports</p> <p>GoG official reports</p> <p>Project Monitoring reports</p> <p>Ghana Shippers Authority</p>	<p>mitigated by: (i) effective resources mobilization including formulation of condition to first disbursement; (ii) full involvement of the Municipalities and Land valuation board at an early stage;</p> <p>3)Securing commitment of co-financiers;</p> <p>4)Apply adequate contingency</p> <p>5)Closer monitoring / coordination by Bank and Government;</p> <p>6)Better contract management by the PCU</p> <p>7)Program shall target youth and women to obtain all the support they require and use experienced implementing partners with a mechanism to ensure close follow up</p>																																																														
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Implementation Schedule

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MANAGEMENT REPORT AND RECOMMENDATION TO THE BOARD OF DIRECTORS ON THE PROPOSAL TO AWARD A LOAN TO GHANA TO FINANCE THE EASTERN CORRIDOR ROAD DEVELOPMENT PROGRAMME - PHASE 1

Management hereby submits this report and recommendation concerning a proposal to award an **ADF Loan of UA 58.3 million** to the Republic of Ghana to finance the Eastern Corridor Road Development Programme (Phase 1).

1 STRATEGIC THRUST AND RATIONALE OF THE PROJECT

1.1 Project Background

1.1.1 The transport sector in Ghana has over the years been guided by Government policies and strategies aimed at effectively providing efficient transportation services that serve as catalyst for economic growth. The sector draws guidance from the National Transport Policy (NTP), Integrated Transport plan (ITP) and National Medium Term Plans rolled out by Government every four years following the 4 years election cycle. The country's medium term development agenda aims at making Ghana the Transportation and Logistic Hub of West Africa – providing air/road/rail and sea linkages to countries in the sub-region and especially for its landlocked neighbouring countries of the Sahel Region.

1.1.2 The various transportation modes in Ghana cover road, rail, air, sea and inland waterways. The predominant mode of transport in Ghana is road with an estimated market share of over 95% for passenger traffic and 90% for freight. The classified road network constitute trunk, urban and feeder roads. Trunk roads run through the country connecting the regions and linking Ghana to its neighbours. Feeder roads connect the towns and villages into the main trunk roads while the urban roads are the roads within the cities and major towns. As at December 2017 the road network size was 78,401 kilometres constituting 48,357 km feeder roads, 14,583km urban roads and 15,452 km trunk roads. The trunk roads include four main regional corridors which connect the two coastal sea ports to major cities/towns in the hinterland and neighboring countries - Togo, Burkina-Faso, Mali, Niger and Cote d'Ivoire.

1.1.3 The Eastern Corridor along which this project is located is defined as National Road - N2 - approximately 695km and one of three north-south corridors (Eastern, Central and Western corridors) in the country, linking the southern coastal seaports to the hinterland and landlocked neighbours in the north. It is a strategic alternative route to the main Central Corridor, shorter route by almost 200km with fewer bottle-necks such as major urbanised towns making it a much safer and economical link especially for transit trade. It is a multi-modal corridor with several sections either recently completed or being considered for construction.

1.2 Project Linkages with Country Strategy and Objectives

1.2.1 The Government of Ghana (GoG) has put a high priority on developing the Eastern Corridor. The project is aligned with Ghana's Coordinated Programme of Economic and Social Development Policies (2017 – 2024), which, under the jobs and prosperity agenda, also seeks to address trade facilitation and market access in Ghana. This is further elaborated in the country's Medium Term National Development Policy Framework (2018 – 2021) and Roads Sector Medium Term Development Plan which seeks to develop road infrastructure to enhance trade opportunities for Ghana as well as increase the competitiveness of Tema Port whilst reducing trade barriers along the international road transit corridors in Ghana.

1.2.2 The project also aligns with Ghana's 10 Point Industrialization Agenda, particularly to the One-District One-Factory (1D1F) initiative. It is expected to engender significant private sector participation in agriculture related activities anchoring around road as a strategic and catalytic public sector investment and leveraging on other Bank interventions for access to finance (e.g. GIRSAF) and business development Rural Enterprises Programme (REP).

1.2.3 On the side of the Bank, the project aligns mainly with the Bank's Ten Year Strategy (2013-2022) in the areas of Infrastructure Development, Regional Integration and Skills and Technology with emphasis on Agriculture and Gender mainstreaming. The Project also aligns with three of the High Five priorities - **Feed Africa, Integrate Africa and Improve the quality of lives of the people of Africa** respectively as detailed in the various components. Under Pillar 2 of the Ghana Country Strategy Paper (2019 – 2023) - “Support Infrastructure Development that are Enablers of Domestic and Regional Trade”, the Project fully supports the Bank's strategic objectives for Ghana and is a key project in the CSP and ADF14 and ADF15 lending programmes. Through the ancillary facilities provision, gender focus and the youth employability component, the programme is consistent with the Bank Group's Human Capital Strategy, Strategy for Jobs for Youth in Africa (2016-2025) and Ghana's National Gender Policy - which notes how investment in the infrastructure plays a significant role in promoting gender equality and empowerment of women.

1.3 Rationale for the Bank's Involvement

1.3.1 The rationale for the Bank's intervention is driven by the need for an alternative north-south corridor linking the port of Tema to the northern hinterland and across the borders to Ghana's landlocked neighbours including Burkina Faso, Mali and Niger contributing towards an efficient multi-modal transportation system that promotes Ghana's ports and corridors to enhance inclusiveness, stimulate socio-economic development and facilitate domestic and regional trade and integration which is fully in line with the Bank's development goals. The Bank being the lead DP in the Transport Sector Working Group will leverage its position to mobilise resources and contribute towards collective efforts being made by GoG and DPs to operationalise the Eastern Corridor as an alternative multi-modal transport route.

1.3.2 This is an integrated project with ancillary services and facilities comprising trainings and provision of socio-economic infrastructure. Support to enhance the livelihoods of women and youth are planned through training and jobs creation. The Bank's approach on trade facilitation is to ensure complementarity between hard and soft infrastructure interventions, and ensuring these initiatives are implemented in tandem. These interventions, though implemented in Ghana, will have a regional impact, and especially for the landlocked countries that use the Tema port for access, thus enabling regional integration. The Bank has a two-pronged approach to agriculture development: (i) value addition and (ii) productivity improvement. For value addition the Bank is assisting Regional Member Countries in establishing Staple Commodities Processing Zones (SCPZ) which are purposely built shared facilities, to enable agricultural producers, processors, aggregators and distributors to operate in the same vicinity to reduce transaction costs and share business development services for increased productivity and competitiveness. By bringing adequate infrastructure (roads, energy, water, ICT) to rural areas of high agricultural potential, they attract investments from private agro-industrialists/entrepreneurs to contribute to the economic and social development of rural areas. This project avails opportunities for the setting up of SCPZs at high agricultural production areas along the Eastern Corridor that will create wealth and jobs and help turn these rural areas from areas of “economic misery to economic prosperity.”

1.4 Development Partner's Coordination

1.4.1 Donor coordination in Ghana is carried out at both national and sector levels. The Heads of Cooperation attended by Heads of Diplomatic Missions and Aid Agencies, and Heads of Government Ministries meet on a monthly basis and deliberate on national policy issues and provide guidance at that level. Dialogue at the sector working groups (SWG) level is jointly led by development partners (DPs) and the Sector Ministries. The Bank Country Office in Ghana (COGH) currently co-chairs the Heads of Missions Group and the Transport Sector Working Group and aims at implementing the G20 Compact With Africa (CWA). Under the

CWA, the role of the Bank alongside other development partners is to assist Ghana identify relevant reforms, and support the country to implement the identified reforms through technical assistance (TAs) and financing.

1.4.2 At the Sector level, the Transport Sector Working Group (TSWG) meets quarterly to discuss key policy issues and agree on set deliverables pertaining to the sector. The sector group has successfully held the Transport forum (conference) every two years to enable stakeholders in the sector deliberate on significant sector issues and develop an action plan for improvement. Major development Partners involved in the sector include the World Bank, AFD, JICA, China, Brazil, KOICA, EU, SECO and recently UNOPS and OFID. The Bank is one of the leading financiers in the transport sector and is currently the chair of this Working Group. The cooperation with the DPs and the team spirit built over the years with the respective Task Team leaders of various projects has contributed immensely to the successful implementation of programmes and projects. The Bank is jointly financing this project with OFID whilst JICA parallel finances the connecting bridge. OFID will be represented in the TSWG by their Task Manager and will be following-up actively with other DPs in the Sector.

2 PROJECT DESCRIPTION

2.1 Project Objectives

2.1.1 The primary objective of the Eastern Corridor Development Programme (Phase 1) is to contribute towards an efficient transportation system that promotes Ghana's ports and corridors to enhance inclusiveness, stimulate socio-economic development and facilitate domestic and regional trade and integration. The specific objective of the project is to: i) enhanced travel along the Eastern Corridor; ii) reduce road accidents; iii) improve basic social service delivery; iv) increase in value added agricultural products and exports; v) improved transit trade.

2.2 Project Description and Components

2.2.1 Based on a request from GoG for support for a targeted section of the Eastern Corridor development project, the Bank (AfDB) financed detailed design studies of the road sections (sections 1, 3 and 4) whilst the Japan International Cooperation Agency (JICA) financed detailed design studies of a new bridge (section 2) across the Volta river linking the road stretches on either side. The project components are outlined in table 2.1:

Table 2.1: Project Components and Description

COMPONENT	Est. Cost (USD mil)	DESCRIPTION
1) Roads Construction Works:	87,600,000	This component covers the main civil works contracts incorporating: i) construction of two road sections - Section 3 Dufor Adidome – Asikuma Junction (39.2km) and Section 4 Asutuare – Aveyime (23.9km) including 2 no. interchanges at Dufor Adidome and Asikuma Junction; ii) implementation and monitoring of the ESIA and RAP.
2) Consultancy Services:	7,800,000	This component covers the consultancy services contracts supporting project implementation and monitoring. It incorporates: i) Design review & supervision of civil works; ii) Monitoring & Evaluation of Project's impact; iii) Audits – Road safety, Technical, Procurement, Financial; iv) Sensitisation - Campaigns on road safety, gender and women's rights, HIV AIDS, STDs, etc.); v) Studies for future road projects, study for establishment of Agro-industrial parks along the Eastern Corridor and study for a water and sanitation system for the communities within the project area.
3) Project Management & Institutional Support:	3,000,000	This component focuses on supporting and enhancing performance of the Executing Agency, Project Coordination Unit (PCU) and AfDB Desk Office . Interventions will include: i) Technical Assistance support in FM, Project Management, Social Safeguards, Contracts and

		records keeping; ii) Trainings in specialized fields; iii) Provision of Logistics and equipment; iv) general operations and coordination
4) Community Support:	7,400,000	This component focuses on addressing the immediate needs of the communities located along the project corridor . It emphasizes selectivity, integration and prioritizes support under three sub-components as follows: i) Skills Development : The project will train selected youth and women in the community to enhance their employability and entrepreneurship. Specifically the project will train construction gangs to avail services to the roads constructor and thereafter other constructions such as artisans, auto related services and other entrepreneurial occupations. ii) Support for establishment of District and Community Level Agro-Processing Facilities : Under the guidance of the Ministry of Trade and Industry, the project will provide facilities for livestock and fish processing and cassava, cereals and fruit processing for men and women. iii) Social infrastructure development - emphasis on rehabilitation and improvements of existing facilities including 15 Basic Schools; 6 Health Posts; construction of 2 markets and 2 multi-functional centers. The Program will help address the needs of an estimated 228,665 people in the three districts and impact the lives of over 5.4 million inhabitants 53.6 % are women, children, and youth.
5) Trade & Regional Integration:	750,000	This component looks at soft interventions to maximize the efficiency of the corridor by ensuring that procedures and controls governing the movement of goods along the Eastern Corridor do not impede trade and, instead help maximize the benefits of the road infrastructure and enhance regional integration. It is made up of three sub-components, namely: i) Customs related activities : the project will train customs officials on transit procedures and regulations, transit process flow as well as the monitoring of transit traffic along the corridor. ii) Inter-Agency Coordination : the project will undertake a study on business process mapping and the re-engineering of agencies operating at Tema port; as well as establish an inter-agency coordination platform to address bottlenecks along the entire trade corridor. iii) Corridor Coordination Activities : the project will facilitate the establishment of corridor coordinating institutions and negotiation of corridor MOU with Burkina Faso and Mali to ensure smooth traffic along the eastern corridor; as well as the harmonization of policies, laws and regulations along the corridor.

2.2.2 Gender: considerations have also been taken into account in the project activities allowing wider distribution of benefits and enhancement of project's positive impacts through: (i) improving access of women and youth to skills training to enhance competencies and job creation; (ii) improving women's economic and social empowerment by organizing them into groups and supporting their income generating enterprises (iii) ease access to gender sensitive and adequate health and educational facilities; and (iv) include them in the resettlement and compensation process.

2.3 Technical Solution Retained and Alternative Solutions Considered

2.3.1 This project includes upgrade of road section 4 (Regional Road) from gravel feeder road to Double Bituminous Surface Treatment (DBST) and construction of a new alignment for road sections 1 and 3 (National road) to DBST as well. The Study included data collection, site investigations, traffic surveys, environmental and social conditions assessments, discussions with GoG officials, the Bank and JICA, as well as project stakeholders and beneficiaries. The adopted option entails a pavement structure comprising option 3 in table 2.2 and improved horizontal and vertical alignments on 7.3m carriageway with 2.0m to 2.5m shoulders and enhanced drainage structures. Section 3 and 1 each includes two grade separated interchanges at the beginning and end of each road.

Table 2.2 :Other Project Alternatives explored and reasons for rejection

OPTION 1 <i>(includes removal and replacement of black cotton clay subgrade with selected fill material)</i>	OPTION 2 <i>(includes removal and replacement of 600mm thick of black cotton clay subgrade with selected fill material)</i>	OPTION 3 <i>(maintains the black cotton clay subgrade and provides average 1-meter capping layer of fill material to formation level)</i>
50mm asphaltic concrete wearing course; 100mm asphaltic concrete binder; 250mm crushed stone base; 175mm granular sub-base;	Double bituminous surface dressing; 150mm mechanically stabilized gravel sub-base; 200mm mechanically stabilized gravel base; 600mm selected fill;	Double bituminous surface dressing; 200mm natural gravel base; 150mm natural gravel sub-base (200mm for section 4); 1m capping layer (no capping layer for section 4)
Exceptional High Cost is the reason for rejection of Options 1 and 2, and selecting option 3 for implementation.		

2.4 Project Type

2.4.1 The ADF financing will support construction and rehabilitation of identified economic and social infrastructure. The investments against which funds are to be disbursed are well defined and specific. The specific project loan has therefore been chosen as the most appropriate instrument for the intervention of the Bank in this project.

2.5 Project Cost Estimate and Financing Mechanisms

2.5.1 Based on the Project reference design, the Project costs were based on the feasibility studies conducted in 2012 and updated in 2017. They took into account international norms, and prevailing rates and went through a rigorous methodology to arrive at the final Project cost estimates. The total Project cost, net of taxes and customs duties, including physical and financial contingencies is USD108.27 mil. or UA77.31 mil. or GHS536.20 mil. using February 2019 exchange rates of UA1= USD1.4007 = GHS6.9343. The indicative taxes is 6% or USD5 million covered by GoG. Tables 2.3 provide a breakdown of the Project cost. A more detailed cost table is attached in appendix v.

Table 2.3 : Project Cost by Category of Expenditure Net of Taxes (USD million)

CATEGORY	FE (USD Mil)	LC (USD Mil)	Total (USD Mil)	% Foreign
Goods	0.56	0.06	0.63	90%
Works	80.01	14.49	94.50	85%
Services	9.47	1.61	11.08	85%
Operating Cost	0.32	0.04	0.35	90%
Total Project (Base Cost)	90.36	16.20	106.55	85%

Table 2.4: Estimated Project costs per component (USD million)

Project Description - Eastern Corridor (Phase 1)		FE (USD Mil)	LC (USD Mil)	Total Cost (USD Mil)	% Foreign
1) Road Construction Works		73.80	13.80	87.60	84%
A1.	Construct Road Sections 3 & 4	73.80	8.20	82.00	90%
A2.	RAP & ESIA Implementation & Monitoring	-	5.60	5.60	0%
2) Consultancy Services		7.42	0.38	7.80	95%
B1.	Design Review + Supervision Consultancy	4.00	-	4.00	100%
B2.	M & E of Project's Socioeconomic Impact	0.45	0.05	0.50	90%
B3.	AUDITS	0.45	0.05	0.50	90%
B4.	Sensitisation & Campaigns	0.22	0.02	0.24	90%
B5.	Project Documentary	0.05	0.01	0.06	90%
B6.	STUDIES	2.25	0.25	2.50	90%
3) Project Management & Institutional Support		1.80	1.20	3.00	60%
C1.	TECHNICAL ASSISTANCE	0.41	0.05	0.45	90%
C2.	Trainings for the PCU	0.23	0.03	0.25	90%
C3.	Operations of the PCU	0.32	0.04	0.35	90%
C4.	Goods for the PCU	0.56	0.06	0.63	90%
C5.	Auxillary Costs of PCU (GoG contribution)	-	1.00	1.00	0%
C6.	ESW Transport Sector Coordination &	0.18	0.02	0.20	90%
C7.	Support to AfDB Desk @ MOF	0.11	0.01	0.13	90%
4) Community Support		6.66	0.74	7.40	90%
D1.	Agro-Industries	1.08	0.12	1.20	90%
D2.	TVET and Skills Development	0.45	0.05	0.50	90%
D3.	Community Infrastructure	5.13	0.57	5.70	90%
5) Trade & Regional Integration		0.68	0.08	0.75	90%
E1.	Customs related activities	0.23	0.03	0.25	90%
E2.	Inter-Agency Coordination	0.23	0.03	0.25	90%
E3.	Corridor Coordination Activities	0.23	0.03	0.25	90%
Total Project (Base Cost)		90.36	16.20	106.55	85%
Unallocated / Contingency 10% (excl Road Works)		1.72	-	1.72	100%
TOTAL PROJECT COST (incl. contingencies)		92.07	16.20	108.27	85%
Taxes (6% of Civil Works) (GoG)		-	5.00	5.00	0%
TOTAL PROJECT COST (incl. contingencies)		92.07	21.20	113.27	81%

Financing Arrangements

2.5.2 This proposed project is expected to be financed by the Bank, OFID and GoG and parallel financed with JICA. The JICA loan of USD100 million as parallel finance for the bridge construction in Section 2 has already been secured by GoG and procurement for the Bridge Works is currently ongoing. Total project cost for the Eastern Corridor Road Development Programme (Phase 1) co-financed by the Bank, OFID and GoG is USD113.27 million or UA80.91 million. OFID loan of USD20 million will exclusively co-finance the road works (18%) with the Bank whilst GoG counterpart contribution of USD11.60million will cover RAP & ESMP, Operations costs of the Project Coordination Unit and taxes (10%); the Bank's funding from ADF14 allocation of UA58.30 million equivalent to USD81.67 million (72%) will cover all the remaining activities including co-financing the road works with OFID. The proposed tentative project financing plan and source is shown in table 2.5.

Table 2.5: Source of Financing Net of Taxes (USD million)

Source of Financing	FE (USD Mil)	LC (USD Mil)	Total Cost (USD Mil)	% of Total	Equivalent (UA mil)
AfDB	73.62	7.55	81.67	72%	58.30
OFID	18.45	2.05	20.00	18%	14.29
GoG (net)	-	6.60	6.60	6%	4.72
Project Cost (net of taxes)	92.07	16.20	108.27	96%	77.31
Taxes	-	5.00	5.00		3.60
GoG (incl taxes)	-	11.60	11.60	10%	8.32
Total with Taxes	92.07	21.20	113.27	100%	80.91

2.6 Project Area and Beneficiaries

2.6.1 This road project forms part of the 695km Eastern Corridor Road that stretched between Tema and Kulungugu (border town with Burkina Faso). This road passes through 16 districts with a mostly agrarian population. The section of the road to be constructed in this project covers eight (8) districts and one (1) metropolis in three (3) regions. The new districts are: Yilo Krobo, Manya Krobo, Asuogyaman (in the Eastern Region); Dangme West and Dangme East (in the Greater Accra Region); South Tongu, North Tongu, Adaku-Anyigbe (in the Volta Region) and Ho metropolis (in the Volta Region). The project is expected to address the needs of an estimated 228,665 people and impact the lives of over 5.4 million inhabitants, 53.6 % are women, children, and youth, majority of whom live below the poverty line. The road traverses an area that is noted for its production of cassava, corn, tomatoes as well as cash and food crops for consumption and exports.

2.6.2 The direct beneficiaries of this road project includes transporters along the road and community dwellers mostly engaged in farming, agro-processing, trading, social services and tourism. The target population of over 5.4 million are to benefit from the project. The beneficiaries are mainly the most vulnerable segments of the population including youth, women and children with emphasis on rural poor in the beneficiary districts- Shai-Osudoku, North Tongu, and Ho-West.

2.7 Participatory Approach to Project Identification, Design and Implementation

2.7.1 . During the preparation phase of this project GoG initiated plenary information and consultation sessions with the project area notably the Project Affected Persons (PAP), with the support of the delegated supervisory authorities. As part of the preparation of the ESIA, ESMP and RAP reports, the consultant held six (6) public consultations with relevant stakeholders to capture the significant concerns associated with the project. The process ensured that these groups were given the platform to voice their opinions and views. The process also gave prior disclosure of relevant and adequate project information to stakeholders.

2.7.2 The ESIA/RAP Study Teams, GHA and AfDB mission team held stakeholders ESIA/RAP awareness and education public meetings on 20/04/2018 at Asutuare Junction, Asutuare, Volivo and Aveyime. The Grievance Redress Committee team was inaugurated after meeting with the PAPs. Participants of the various public meetings included representatives of community-based associations such as the Ghana Private Road Transport Union (GPRTU), Drivers, Taxi Owners, Market Women, Rice Traders, Teachers, Parents, Home Owners, Property Developers, Nurses, Assembly Men and Women, Elders, Rice Farmers, Fruits and Vegetable Farmers, Project-Affected-Persons (PAPs) and Project Community Residents. The stakeholder consultative and engagement meetings provided views, opinions and suggestions on the most appropriate considerations on the construction and use of the proposed roads project. The sessions also laid out fears and concerns to be addressed during construction. To ensure that both women's and men's views were taken on board in the project design, consultations sought community participation and instant feedback into the project design especially matters related to resettlement and compensation payment as well as community support as a dedicated component of the project to address the communities immediate needs and help improve livelihoods. The consultations created awareness and identified positive and negative socio-economic impacts of the roads project, proposed mitigation measures to address the potential impacts during pre-construction, construction and operation phases.

2.7.3 The consultations with the community brought to the fore the expressed needs for the youth in particular to be trained in construction and other trades to enable them participate in road works. The women's groups tabled the need to be provided with multifunctional centres to facilitate work team/ women's groups to work together to generate income and also the

urgent need to have access to potable water for improved health outcomes. These concerns were taken into account in crafting the training programmes for the youth, women's groups and the support to undertake the feasibility study for gender sensitive water and sanitation systems to be funded by the project. Similarly by the men who requested for agri-processing.

2.7.4 As part of the Bank's preparation and appraisal missions, extensive consultations and follow-up meetings were also conducted with other project stakeholders including Development Partners which also informed the project design under community development and institutional support components. The mission team had consultations and discussions with Community Water and Sanitation Agency, National Board for Small Scale Industries during the appraisal mission. The ESIA, ESMP and RAP reports have been submitted to EPA in line with the requirements of LI 1652 and the ISS. This participatory process and public consultation will be maintained throughout the project processing and implementation.

2.8 Bank Group Experience and Lessons Reflected in Project Design

2.8.1 The Bank Group's ongoing portfolio comprises 21 operations and no backlog of PCRs. Total value of these operations is UA607.3 million consisting 12 public sector operations with a total value of UA318.4 million, 1 multinational operation at UA1.13 million, and 9 Private sector operations of UA288.3 million. The non-sovereign operations make up about half of the total portfolio. The sectoral distribution of the public sector portfolio includes agriculture 31%, transport 19%, social sectors 22%, energy 15%, water and sanitation 11% and multi-sector 2%.

2.8.2 Since 1981, the Bank has financed 11 road projects, 1 railway project, 4 road studies, and 1 multinational project in addition to supplementary loans all totalling UA318 million. Currently, there is 1 ongoing Urban Project which was approved in 2016 namely the Accra Urban Transport Project (AUTP). This project is neither problematic nor potentially problematic; disbursement targets are being met and project supervisions and monitoring are carried out regularly; potential problems are identified and addressed in a timely manner. The PCRs for all completed projects have been prepared and submitted; there is no PCR backlog for the transport projects. It is to be noted that transport projects financed by the Bank have made significant contribution towards improving mobility, providing access to socio-economic opportunities for several millions of people and facilitating regional integration. Two flagship projects are the Ghana Airport terminal 3 and the Ffulso-Sawla road project which are driving regional integration and domestic trade through lower cost and improved market connectivity and playing a key role in the Country's strategy to become a regional hub in the continent.

Lessons learnt

2.8.3 The Bank's existing and previous interventions in the transport sector in Ghana total eight in the past decade. PCRs for these road projects have been completed with an average rating of 3.5 (satisfactory). The Ffulso-Sawla Road project one of the recently closed project won a presidential award in 2017 for inclusiveness and regional integration. It is now being showcased as model project to replicate across the country. The transport portfolio previously constituted mostly problematic and aging projects which suffered considerable delays and cost overruns mainly attributed to inadequate designs and gaps in project management. The performance of the transport portfolio in Ghana has improved significantly with 0% of the transport portfolio classified "at risk". The Accra Urban Transport Project which was approved in 2016 achieved significant Bank's Presidential Directive (PD02/2015) milestones by being signed within 3 months of approval and becoming effective within 6 months of same. Project is currently progressing successfully and targeted at being completed within schedule.

2.8.4 The project design has drawn on lessons learnt from the Bank and other DPs' extensive experience in Ghana, particularly in the transport sector. The project detailed design has undergone series of consultations and has included inputs from all the major stakeholders, which has advised on the various project components including trade facilitation, community

support, institutional support, jobs for the youth and women. The project design also incorporates capacity building measures to strengthen the PCU to enable them perform better and ensure successful implementation of the project.

2.8.5 The project design takes into account lessons learnt from the Bank's on-going as well as previous interventions in the sub-sector. These include: i) Readiness for execution - Ensuring quality at entry and also during implementation with a full complement of staff of the PCU team is important; ii) Coordination and delivery of the work program is key for effective delivery of the project. - Strong ownership and leadership of the project by the Ministry of Roads and Highways in coordinating the delivery of the road project including ancillary services; iii) Sector ownership of ancillary services - *health, education* is important to enhance sustainability of investments. - Signing of agreed sector actions with roles and responsibilities for sector ownership of ancillary services is essential before Project commencement.

2.8.6 Under FM, as part of lessons learnt from previous projects implementation of Bank financed project, the current project design ensures the availability of an accounting reporting package (GIFMIS, integrated with Mega Systems) to accommodate project accounting and financial reporting in harmony with GoG and other DPs financial reporting. Full use of country systems to the extent permissible by Bank FM rules has been recommended. The project will use the fiduciary staff of GHA Projects Coordination Unit headed by the Chief Accountant for Projects with reporting responsibilities not only to the Project Coordinator, but also to the Director of Finance for preparing GHA consolidated financial reports.

2.8.7 Though some previous projects did not operate special account, as part of lessons learnt, the operation of Special Account (SA) is recommended under this project, to effectively manage eligible smaller payments relating to operating expenses to enhance efficiency. The SA will be opened at the Central Bank and managed by GHA in line with the Bank disbursement procedures. The Head of the FM function is a qualified accountant with good experience on the management of Donor financed projects' Special Accounts. A training session will be held during the launching session to equip them with requirements regarding the Bank's FM rules and disbursement requirements.

2.8.8 Learning lessons from the Fufulso-Road Project vis-à-vis the implementation of other Bank financed projects in Ghana, implementation of the latter was perhaps, on schedule because there was no counterpart funding requirements from government and activities got executed without funds related delays. Since government will be paying for compensations and E&S costs under this project, it is recommended that GHA includes their estimated costs in the Authority's budget, the budget be approved and the moneys made available before project commencement to avoid delays.

2.8.9 The Fufulso-Sawla Road Project though innovative had numerous scope extensions. As part of lessons learnt, this project held several stakeholder consultations at the project sites with the beneficiary communities comprising of women, youth, chiefs, local representatives, assemblies and training institutions. Consultation meetings were also held with other development partners in country. The joint design team comprising of the Bank and OFID (co-financier) had worked closely with JICA (financing the bridge construction of same Phase 1) and government throughout the design process. The Bank team comprised of various key sector experts who actively participated. The overall objective is to ensure that the design is exhaustive, relevant and can be effectively implemented over the estimated life span.

2.8.10 The project has also drawn lessons from some Bank funded projects such as: the Arusha-Namanga road between Tanzania and Kenya where the Bank funded construction of a cross-border road but did not address the trade facilitation issues, which resulted into delays at the border post during operation thereby negating the gains from the improved road infrastructure; the Kazungula Bridge Project ensured the mainstreaming of soft infrastructure intervention in a physical infrastructure project, with positive results on trade facilitation; as well as the Walvis

Bay-Ndola-Lubumbashi Development Corridor, under which the Bank supported the establishment of an interim corridor management institution, which led to better planning and coordination of corridor activities. The key lesson has been to integrate hard and soft infrastructure interventions.

2.9 Key Performance Indicators

2.9.1 The main objective of the Project is to enhance regional trade and integration and boost socioeconomic growth. The project will create 1,500 direct jobs (at least 30% women) during construction and 850 indirect jobs (250 youth – at least 40% women). The Eastern Corridor project will boost regional integration through trade by facilitating movement of passenger and goods between Ghana and its landlocked neighbours as well as integrate the coastal capital city with the hinterland. At opening, the project will improve travel times and result in cost savings for businesses and people due to the travel time saving of up to 60 minutes between Tema and Asikuma junction and assure road safety through reduction of accidents. The project will also help to provide support to education and health services delivery with expected contribution to the increase of Gross enrollment ratio (GER) from 79% to 81% by 2024. The project will also see value chain addition in meat and fish processing and increase in volume of agricultural production including fruits and vegetables by up to 20%. The project will address the human capital deficit in the construction sector in the project are by training over 500 youth (at least 40% female) in specialised skills including masonry, steel fixing, auto mechanics, etc.

2.9.2 Key gender indicators to monitor during the project implementation comprise: i) number and percentage of women and men employed in construction, operation, and maintenance, by type of job and pay rates; ii) number and percentage of women and men receiving compensation package; iii) Number of market spaces constructed or reserved for women along the road; iv) number and percentage of women who report an increase in income from their commercial enterprises; v) Number and percentage of people sensitized on prevention, awareness, on transport safety, HIV/AIDS, gender and women's right, by sex and target group.

2.9.3 The indicators under trade facilitation include: Transit time for goods passed through Ghana is expected to reduce by 40% from 15 days to less than 10 days. Training of customs officials on transit regulations and procedures; harmonisation of policies and regulations pertaining along the corridor; conclusion of a corridor MOU; and improved transit process flow at Tema Port. Progress on these indicators will be monitored on a quarterly basis through project implementation reports and project supervision. More information on the project indicators and results are captured in the log frame and the project has made provision for Monitoring and Evaluation of these indicators during the life of the project.

3 PROJECT FEASIBILITY

3.1 Financial & Economic Performance

3.1.1 The economic analysis was conducted using the Highway Development and Management model (HDM-4) for both: (i) the Construction of the Proposed New Road between Asutwae Jct. and Asikuma Jct. (68.55km) and (ii) the upgrading on Asutwae – Aveyime Road (23.9 km). The characteristics of traffic on the proposed new Eastern Corridor were identified. This traffic is mostly generated by the diversion of heavy vehicles from the central corridor and the R28 route via N1 as well as the diversion of light vehicles from the Asutwae – Asikuma section on the existing Eastern Corridor in addition to the two routes.

3.1.2 The evaluation of the project current cost accounting is based on the cost-benefit method, which aims at evaluating the costs and benefits linked to the two situations: (i) The baseline situation, corresponding to the Project non implementation or “without project”; (ii) The “with project” situation, corresponding to project implementation. The comparison of the Cost-benefit balance between both situations allows to assess the Project Economic Benefit. The

analysis period of the projects was determined to be 20 years plus the construction period. Both roads are assumed to be opened to traffic in 2022 following the construction period of three and two years. A discount rate set at 12% and a residual value for the new road equivalent to 30% of original cost will be credited to the project in the final evaluation year 2041.

3.1.3 Capital costs have been estimated excluding taxes and customs duties. Other operational costs include: (i) road maintenance costs; (iii) vehicles operating costs and; (iv) travel time. The major benefits associated with the project are savings in road maintenance and VOC and travel time as well as agricultural development induced by the construction of the proposed new road between Asutuare Jct. and Asikuma Jct. The project costs and benefits derived in both projects are combined as annual flows covering the full project period.

3.1.4 The above-mentioned analysis produced an economic rate of return (EIRR) of 18.77% for the Asutuare – Asikuma section and of 19.44% for the Asutuare-Aveyime one. A summary of the economic analysis is presented in table 3.1.

Table 3.1 : Stakeholders/Distributive Results

Asutuare – Asikuma Section	EIRR	NPV (USD mil)
Baseline Scenario	18.77%	29.18
Assumption of 20% increase in investment costs	15.68%	18.33
Assumption of 20% decrease in cumulative benefits	15.07%	12.71
Assumption of combined 20% increase in investment costs and 20% decrease in cumulative benefits	12.39%	1.85
Asutuare-Aveyime Section		
Baseline Scenario	19.44%	14.99
Assumption of 20% increase in investment costs	16.05%	9.48
Assumption of 20% decrease in cumulative benefits	15.38%	6.59
Assumption of combined 20% increase in investment costs and 20% decrease in cumulative benefits	12.48%	1.07

3.1.5 Thus, by conducting a sensitivity test (20% increase in project cost and 20% reduction in benefits), the ERR finally settles at more than 12%, the estimated opportunity cost of capital with a positive net present value. The project is therefore economically viable for the local communities.

3.2 Environmental and Social Impact

3.2.1 The Bank classified the project as a Category 1 based on the potential environmental and social impacts likely to result from the construction and operation of the road project. These include: i) impacts on surface water and wetlands; ii) loss of vegetation due to diversions and material sourcing; iii) sedimentation in watercourses during construction; iv) soil erosion from exposed areas during earthworks; v) dust and fugitive emissions from construction equipment, asphalt and crushing plants; vi) soil and water contamination from oils, grease and fuels; vii) environmental pollution from liquid and solid waste generation from construction camps and work sites; viii) social disruption including physical and economic displacement of persons living within the road Right of Way; and ix) socially related infections associated with interactions including HIV/AIDS and other communicable diseases.

3.2.2 Mitigation measures for adverse impacts have been included in the ESMP. These measures include: i) construction work at all rivers, streams and wetlands must be preceded by production of method statements; ii) no stockpiling of construction materials within a distance of 200-300m of a watercourse or wetland; iii) restoration of borrow sites and rehabilitation of quarry sites after use; iv) suppression of dust by watering the diversions and haulage routes;

suppression of dust in the crushers by installing sprinkler system and maintaining equipment to manufacturer's standards; v) construction of bridges and culverts during the dry season and provision of protection measures for streams to limit sediment transport into watercourses; vi) limit clearance of vegetation to areas where it is absolutely necessary; vii) re-vegetation of degraded areas upon completion; viii) implementation of a waste management plan; ix) implementation of the RAP; and x) undertaking sensitization campaigns on HIV/AIDs along the project corridor during construction. The contracts will clearly stipulate obligations on contractors to ensure a healthy environment and take measures to reduce the risk of abuse by their workers. Contractors will also be required to have a workers code of conduct.

3.2.3 Despite the negative impacts highlighted, it was observed that the project also has a multitude of positive impacts identified include: i) facilitation of regional integration and trade between Ghana and neighbouring countries; ii) creation of employment opportunities for the beneficiary communities especially during construction; iii) increasing Road Safety; iv) reduction of travel time. Overall cost of implementing the ESMP including E&S Monitoring is estimated to less than USD 6.0 million.

3.2.4 In compliance with the African Development Bank's Integrated Safeguards System (ISS) and the Ghana legal framework, the project required a full Environmental and Social Impact Assessment (ESIA), Environmental and Social Management Plan (ESMP), and a Resettlement Action Plan (RAP). A summary of the ESIA study reports and Resettlement Action Plan, were prepared, approved, and posted on the Bank's website on 11th February 2019. Meanwhile to comply with the Ghana national requirements, GHA is liaising with EPA on the issuance of environmental permit following the submission of the Environmental and Social Impact Assessment. Detailed information on the E&S categorization, assessment, review process etc. is done in the AfDB ISS system.

3.2.5 Institutional capacity for environmental management: GHA has a well-established Environmental and Social Management Unit (ESMU) which will have overall responsibility of ensuring that the ESMP is implemented by the Contractor. EPA will be involved in the monitoring of the construction activities as part of their regular activities in order to ensure that the environmental mitigation measures are properly applied. The supervision missions of the Bank will validate and crosscheck whether the agreed mitigation measures have been carried out. Furthermore, the supervision consultant will ensure that the civil works contracts reflect the mitigating measures in the contract documents.

Climate Change and Green House Gas

3.2.6 In accordance with the Bank's Climate Safeguard System, the project is classified as category 2. From a vulnerability point of view, the project is exposed to flooding risks. Hydrologic and hydraulic investigations were carried out and appropriate drainage structures have been incorporated in the project design to mitigate these risks. Wetlands have also been avoided and protected duly. Public education and sensitization on the need to protect and safeguard such areas will also be carried out. With regard to CO₂ emissions, due to lack of data, the approach used to quantify the CO₂ emissions consisted in: (i) analyzing traffic data (per type of vehicle) under the project and without the project scenarios; (ii) analyzing time/delay saved under both scenario; (iii) considering that small vehicles running on petrol emit between 130g and 265g of CO₂ per km while heavy vehicles running on diesel emit between 242g and 295g CO₂ / km. On this basis, the project is expected to reduce CO₂ emissions by an equivalent of 1,000t to 1,430t per year as compared to the 'without project' scenario, *ceteris paribus*.

Gender

3.2.7 In accordance with the Bank's Gender Marker System, the project is classified as category 2. Main gender constraints within this project concern (i) women's daily mobility patterns, (ii) payment of compensation to head of household; (iii) women's lack of voice in

resettlement consultations; (iv) lack of gender sensitive facilities in public social infrastructures (schools, health care centers). Various activities have been proposed to address the identified gender constraints in order to make the profit benefit equitably to women/girls and men/boys in the different project areas. Specific gender mainstreaming activities include the following: provision of adequate facilities for both male and female at all public places especially schools and health facilities due to the special needs of girls and women; analysis of development proposals in the light of how it affects both male and female and provide each facility adequately to address their needs; organization of sensitization programs for men and women to encourage cross gender participation in local governance; supporting women trade groups in the districts in accessing resources for their activities; addressing the issue of women access to land for farming, access to training on entrepreneurship and agro processing.

3.2.8 The project will promote the inclusive participation and benefit of both women and men from each category of people (youth, vulnerable groups) in all processes. For that purpose, key gender activities will consist of: i) addressing gender barriers in the construction of the socio economic infrastructure; ii) strengthening women's productive capacity through skill trainings; iii) improving gender knowledge through sensitization and awareness campaigns; iv) improvement of women representation in decision-making bodies in the communities through women's training and establishment of quota rules. Considering the above, the project is classified under category 2 of the Gender Marker System and activities have been incorporated in the overall budget to allow men and women equal access to the yielded project benefits.

Social

3.2.9 In the context of improving the quality of lives of the communities in the Project districts and its environs, the intervention will assist the poor and vulnerable and contribute to socio-economic improvements for women/ youth and children. It will enhance mobility and contribute to productivity and efficiency of the beneficiary communities.

3.2.10 The program operation will create jobs in the construction process (permanent and temporary) and affect on a direct basis, the lives of the rural women and men in the region. The program activities will contribute to spur local economic activities by enhancing economic liquidity, as well as: i) support rehabilitation of gender sensitive social infrastructure, notably basic schools, health posts and multifunctional centres for women and new markets. Other benefits include; ii) skills development: The project will train selected 1,500 youth and women in the community to enhance their employability and entrepreneurship. These include training construction gangs to avail services to the roads constructor and thereafter other constructions such as artisans, auto related services and other entrepreneurial occupations; iii) Support for establishment of District and Community Level Agro-Processing Facilities for women and the youth: Under the guidance of the Ministry of Trade and Industry, the project will provide facilities for livestock and fish processing and cassava, cereals vegetables and fruits processing.

3.2.11 The current condition of the road impedes accessibility to and within the area, resulting in a high level of deprivation. The construction of the Eastern corridor road will facilitate the transportation of agricultural produce to boost socio-economic activities. Additionally, the construction of the road and rehabilitation of health and educational facilities would improve accessibility and enhance the chances of attracting skilled human resources to the area. This would improve service delivery and social development outcomes particularly in health and education. Health and educational infrastructure along the road would be rehabilitated to improve quality of gender sensitive social services in the communities. Furthermore, the construction of the infrastructure in support of tourism (signage, lay-bys, parking) will increase the tourism revenues. The project will also expand access to potable water through the construction of hand pumped/ motorized boreholes in selected communities along the road.

3.2.12 Gender-specific vulnerabilities and risks that will be addressed in this project include HIV/AIDS, sexually transmitted infections (STIs), and other communicable diseases, human

trafficking and unsafe migration. The project has taken measures to maximize benefits and minimize potential negative effects. Improvements in women's earning power particularly in male dominated societies such as the project area could expose them to the risk of violence from their spouses. However, men's incomes will also improve through the project so the risk will be minimal. The inclusion of clauses in works contracts for the recruitment of local labour has been recommended. This could create over 400 jobs for men and women particularly the youth. Mitigation of possible negative impact such as dust pollution has been addressed in the ESMP. The project has budgeted and planned sufficiently for HIV/AIDS and STI prevention in the preconstruction, during construction, and post-construction phases as part of road safety sensitization and awareness creation. The HIV/AIDS sensitization component has been included in the project to mitigate the possible increase in exploitation of young girls and vulnerability to HIV infection by both construction workers and the local population. Works contracts would also include clauses requiring contractors to regularly sensitize their workers on HIV/AIDS. The construction will affect some properties and businesses but the resettlement and compensation measures would enable the affected people to recover from their losses.

3.2.13 The road project entails construction of an existing route and will necessitate acquisition of land for the right of way. The Resettlement Action Plan will include assessment and the payment of compensation and resettlement of PAPs along the road where people assets have been affected. The total number of the Project Affected Persons (PAPs) are 1,454. The assets affected are bare lands, institutions and public assets, buildings and structures, crops and farms. Efforts were made to ensure that no major social, historical infrastructures or cemeteries would be affected. Thus the clearing of Right of Ways especially in settlements along the road does not go beyond the limits mentioned in the approved design. The RAP was prepared and posted on the Bank's website on 11th February 2019 in accordance with the Bank's policy on involuntary resettlement. Compensation and resettlement cost for all PAPs have been estimated at USD5,600,000 to be paid by Government of Ghana as counterpart contribution in the project. The environmental and social unit of GHA will be responsible of implementing the RAP in collaboration with concerned municipal assemblies. A grievance mechanism has been set up as part of the project for the implementation of the RAP. In line with the Bank's requirements, all compensation and where applicable relocation shall be completed before civil works begin. RAP implementation will pay particular attention to timely settlement, and give special support to the vulnerable people and livelihood restoration measures.

4 Implementation Arrangements

4.1.1 The Ghana Highway Authority (GHA) will be the executing agency for the project based on its legal mandate, experience and capacity to implement the proposed programme. GHA was established by Act 540 (1997), as an autonomous authority responsible for administration, control, development and maintenance of trunk roads and related facilities. It is governed by a Board of Directors, whose Chair is appointed by the President of the Republic of Ghana.

4.1.2 The policy oversight of the authority is overseen by the Ministry of Roads and Highways (MRH). A Project Steering Committee (PSC) chaired by the Chief Director of MRH and constituting Heads of the main Agencies relating to the project such as GHA, MoF and other Ministries including Food and Agriculture, Health and Education will oversee the activities of the project and provide strategic guidance and direction of the project. The PSC shall meet at least twice in a year to execute its core mandate on the project.

4.1.3 Project Implementation will be undertaken by GHA through the Project Coordination Unit (PCU) constituting experienced and dedicated staff with focal points from Ministry of Finance and Ministry of Roads & Highways and supported by technical, social and financial experts to oversee the day-to-day management of the project. GHA has used a PCU with similar arrangements for implementation of previous Bank financed projects including the innovative

Fufulso-Sawla Road Development Project and Tema-Aflao Road Project among others. The PCU will also liaise with focal persons from the Ministries of Transport, Food and Agriculture, Education, Health, Trade and Industry, Gender and Social Protection, Youth and Sports, Employment and Labour Relations, Local Government and Rural Development, Lands and Natural Resources respectively, Ghana Community Water and Sanitation Company, as well as Representatives from each of the District Assemblies in the Project Area to facilitate coordination of the various project activities related to these sector Ministries and entities.

4.1.4 GHA through the PCU is expected to be well versed with the Bank's procedures having implemented many donor-financed projects including those financed by the Bank, World Bank and JICA. GHA will be running a separate PCU for the bridge construction funded by JICA. The road works and the supervision services will be undertaken by competent contractors and consultants respectively.

4.1.5 OFID would coordinate closely with the AfDB during all phases of project implementation. In order to ease coordination, it was agreed that the OFID loan will be administered by AfDB. Additionally, OFID would join AfDB in scheduled supervision missions as and when required

Procurement Arrangements

4.1.6 "Procurement of goods, works and the acquisition of consulting services (including non-consultancy services), financed by the Bank and OFID for the project, will be carried out in accordance with the "Procurement Policy and Methodology for Bank Group Funded Operations" (BPM), dated October 2015 and following the provisions stated in the Financing Agreement; specifically, procurement would be carried out as follows:

4.1.7 **Borrower Procurement System (BPS):** Procurement through National Competitive Bidding (NCB) procedures will be carried out using BPS comprising its Laws and Regulations (Ghana Public Procurement Act, 2003 (Act 663), as amended by Ghana Public Procurement Act, 2016 (Act 914) using the national Standard Solicitation Documents (SSDs) agreed during project negotiations for various project components detailed in annex B5.1 and the provisions stipulated in the Financing Agreement.

4.1.8 **Bank Procurement Policy and Methodology (BPM):** Bank standard PMPs, using the relevant Bank Standard Solicitation Documents (SDDs), will be used for International Competitive Bidding (ICB) contracts for both Goods and Works and Acquisition of Consulting Services as indicated in the Technical Annex B5, Para. B.5.3.2.

4.1.9 The Government has requested for Advance Procurement Action (APA) for some key contracts of the project and the details are indicated in the Technical Annex B5, Para. B.5.7.

4.1.10 **Third Party Procurement Policy and Methodology (PMPs):** The procurement of vehicles will be undertaken in accordance with UNOPS' PMPs under the conditions agreed in the Fiduciary principle agreement signed with the Bank on the 8th September 2017 and a tripartite agreement to be signed by the borrower, UNOPS and the Bank

4.1.11 Procurement Risks and Capacity Assessment (PRCA): the assessment of procurement risks at the Country, Sector, and Project levels and the procurement capacity of the Executing Agency (EA), were undertaken and concluded to be a Moderate procurement risk for the implementation of the project. This output informed the decisions on the procurement regimes (BPS and Banks PMP) being used under the project. The appropriate risk mitigation measures have been included in the procurement PRCA action plan proposed in Annex B5, Para. 5.3.8.

Financial Management

4.1.12 The GHA will execute the project through the PCU, which will be directly responsible for the financial management arrangements of the project. The PCU will be headed by an experienced project coordinator with more than fifteen (15) years successful delivery of various

DP projects, who will have overall responsibility for the day-to-day project administration, implementation and coordination. The fiduciary function will be headed by the Chief Accountant for Projects who is an experienced chartered accountant and will be assisted by a project accountant (a qualified accountant). The chief accountant will report to the Director of Finance and the Project Coordinator. Both the chief accountant and the project accountant have hands-on experience on donor funded financial reporting and with good experience on the Bank's FM rules and disbursement procedures. To build capacity, an accounts clerk would be deployed to assist with filing and making basic primary entries of transactions.

4.1.13 MRH (with support from WB) has procured Mega Systems (accounting software), to be adopted by all its units for the generation of financial reports). The assessment recommends that Mega Systems be integrated with GIFMIS and adopted in harmony with government financial reporting. The project will also adopt International Public Sector Accounting Standards (IPSAS) Accruals in line with accountings standards adopted by the Government of Ghana. The accounting policies and procedures manual of GHA, is currently being reviewed. The assessment recommends that AfDB specific FM and disbursement project requirements, should be compiled as an annex, and supplement accounting policies and procedures in the manual. The Assessment further recommends that a project implementation manual (PIM) be developed to guide technical implementation of the project. The internal control systems of GHA, including the internal audit function (which appears adequate and operating effectively) shall be extended to the cover project operations. On a quarterly basis, the chief accountant will generate interim financial reports (IFRs) for the benefit of GHA management and share with the Bank within forty-five (45) days after the end of the quarter. Annual financial reports shall also be generated, audited and the audit reports forwarded to the Bank within six (6) months after the end of each financial year.

Disbursement

4.1.14 Two disbursement methods: i) Direct payment and ii) Special Account methods will be used in disbursing funds under the project. The Direct payments method will be used for payments against contracts for goods, works and services, signed between the Project and contractors / suppliers / consultants; which have been duly cleared by both the Bank and OFID. Contributions from OFID will be used only for co-payments of Civil Works using the direct payment method. The Special Account (SA) method will be used in meeting eligible recurrent expenses. A dedicated USD denominated bank account, will be opened at the Bank of Ghana (BoG), with the approval of the Minister of Finance, to receive ADF Loan resources. A local currency bank account will also be opened at same BoG to receive transfers from the SA for meeting local currency expenses. A second local currency bank account will be opened at BoG to receive cash counterpart fund contributions from the GoG in respect of compensations, E&S costs, sale of bid documents, etc. In-kind contributions from GoG in respect of project staff salaries, rent for office accommodation, vehicles assigned to the project, tax waivers, etc. will be estimated and disclosed. All the project accounts will be managed by GHA. All disbursements will be in accordance with the procedures outlined in the Bank's Disbursement Handbook 2012. As the OFID loan is to be administered by AfDB, all Withdrawal Applications relating to the OFID loan will be prepared in two originals; one to be forwarded to OFID and the second one to be forwarded to AfDB for clearance.

Audit

4.1.15 The Auditor General (AG) of Ghana or a competitively recruited independent private auditor appointed by him, will audit the project at the end of each financial year. The auditors' shortlist from the AG and the audit terms of reference (TOR) will be cleared by the Bank. The use of the AG, is in line with use of country systems and he currently audits some Bank financed projects in country. The audit reports must be submitted to the Bank within six (6) months after the end of the year audited. The Bank will not pay audit fees, from its resources, in the case of

audits performed by the AG, except reasonable incidental audit expenses, which have been duly submitted, reviewed and accepted by the Bank.

4.1.16 The overall FM risk is assessed as moderate and to mitigate this further, GHA is expected to adopt Mega systems and integrate with GIFMIS, develop a PIM to guide technical implementation, finalise and adopt an accounting policy manual and compile the annex consisting of AfDB specific FM, disbursement and procurement requirement.

4.2 Monitoring and Evaluation

4.2.1 The overall procurement, project supervision and monitoring falls under the purview of the GHA, MRH and MoF. The monitoring of environmental and social mitigation measures will lie with the Supervising Engineer and the PCU. Where applicable, the EPA will carry out the external monitoring of the ESMP. An independent consultant will be in charge of Monitoring and Evaluation of the project outputs and outcomes using the selected indicators. On the Financial Management and Auditing aspects, the existing accounting and reporting systems of GHA as detailed above shall apply. In addition, the Bank's periodic supervision missions, which also involve Financial Management Specialist, and review of various project reports will contribute to the monitoring. During the project implementation period, quarterly progress reports will be forwarded to both AfDB and OFID. At the end of the project, a Project Completion Report (PCR) will be prepared by the Consultant and sent to AfDB and OFID within three months of the Project completion date for review.

4.3 Governance

4.3.1 **At national level**, Ghana has consistently maintained a higher governance score than the African and West African averages in the Policy and Institutional Assessment (CPIA). The Global Competitiveness Report 2018/2019 indicated that Ghana scored an all-time high of 51.33 points out of 100, with an improvement in the rank of Ghana's institutions to 59th from 111th in 2018/19. While Transparency International placed Ghana among the least corrupt countries in Africa, the country's global corruption ranking has only marginally improved. The government's rollout of the Ghana Integrated Financial Management Information System (GIFMIS) is an essential development in addressing budget overruns and other loopholes in public financial management. Strengthening the enforcement and remediation mechanisms would be pertinent, going forward. **At sector level**, there has been significant policy reforms that have culminated in the separation of roles and responsibilities, with respect to policy formulation, road development, maintenance, regulation and financing, including the establishment of road funds and authorities. GHA was established under the Ghana Highways Authority Act, 1997 (Act No. 540), as a body corporate to administer, control, develop and maintain the country's trunk road network. Audit and supervision reports of the recent Bank projects have not shown any irregularities that would compromise fiduciary assurance. **At project level**, all the Governance and Anti-Corruption policies and guidelines of the country will be adopted. The Internal audit of GHA and that of the Ministry will complement the oversight of the independent auditor for this project. The proposed technical audit service will further help in providing assurance that funds will be used for intended purposes only with due regard to economy and efficiency. The specific governance risk mitigation measures of the Project include: (i) an Audit by independent auditor to ensure that funds are used efficiently and for the intended purposes; (ii) appointment of independent technical audit consultant; (iii) Bank review and clearance of all project procurement activities; and (iv) effective construction supervision arrangements through separation of Engineer and Employer roles.

4.4 Sustainability

4.4.1 Three main elements influence the sustainability of road projects namely: i) quality of works delivered; ii) the manner of usage; and iii) the level/quality of maintenance. To ensure

that quality standards are achieved during construction, works supervision and monitoring will be undertaken by reputable consulting engineering firms with experience in similar projects. The technical design solution retained considered the present and future traffic volume and composition and underwent thorough review by the MRH Steering Committee.

4.4.2 As part of Axle load control, a new axle control station will be constructed at Asikuma Junction and the Afienya Axle Control Station which is currently not functioning will be rehabilitated. This will support the enforcement of the Axle Load Regulations LI 2180 of 2012, ensure the correct usage of the road and facilitate regional integration provision will be made at the rest stops to be constructed by the project for the National Road Safety Commission, Ghana Shippers Council, Driver and Vehicle Licensing Authority and the Ghana Police to be present on the corridor.

4.4.3 GHA has the responsibility of maintaining all trunk roads in Ghana and will thus have the same responsibility for the Eastern Corridor Road, with funding from the Road Fund. The Road Fund is mandated by law to fund all routine and periodic maintenance activities on all roads. Revenue to the Road Fund increased significantly in 2015 when the fuel levy (which constituted 70.9%) was increased in 2015 from 7.3pesewas \approx 2 cents to 40pesewas \approx 10 cent. This increased the percentage of the revenue to the fund from the fuel level to 90% with the rest of the 10% coming from Road and Bridge Tolls, vehicle registration fees, road user fees and international transit fees. However an Act of parliament (Act 947) mandating all MDAs to allocate a percentage of their revenues towards the government's budget has reduce the funding available to the RF to undertake maintenance. Cash flows from 2016, 2017 and 2018 dipped significantly to 1.15billion cedis, 1.0billion cedis and 798million cedis respectively. The RF has since submitted a request to GoG requesting for an increase in revenue and also proceeded to review the 2016-2018 Tolling Policy. The Eastern Corridor Road is expected to be tolled.

4.4.4 To enhance sustainability of the socio-economic investments, the schools will ensure maintenance plans are put in place. Additionally, through support from Parent Teacher Associations (PTAs) and assistance from school alumini groups, support will be provided to maintain the investments. GoG also give capitation grants and budget for minor repairs in schools. At the community level, the multi-functional centres will include maintenance plans in the annual work plans to support the sustainability of the new centres.

4.5 Risk Management

Specific risk mitigation measures will be taken for financial management. These include: i) appointment of an independent financial auditing firm to ensure the proper fund utilization; ii) Bank prior approval of all project procurement activities; and iii) use of direct disbursement methods for contracts to channel funds to service providers. In addition to these few arrangements, a detailed assessment of potential risks and mitigation measures will be put in place by the project. Table 4.1 summarises the project risks and mitigation measures.

Table 4.1: Summary of Project Risk Matrix

Risk	Mitigation	Responsibility	Rating
Environment, Social & Site Risk	Timely implementation of the RAP is key for smooth project implementation. It is thus recommended that the GHA team carry out the RAP implementation in a professional manner. In addition, it is expected that the resources included in GOG's Budget for meeting the RAP implementation will be released timely for Compensation of the Project Affected Persons (PAPs).	GHA / EPA/ GoG	Medium to High
Operational Risk: (Overloading by heavy duty vehicles)	The GHA will ensure that all road users adhere to specified road regulations and appropriate measures will be taken to control the axle load of the trucks. Furthermore, a weighing station will be constructed as part of the project and the existing one will be rehabilitated.	GHA, PCU, Contractor, MRH	Low to Medium
Effectiveness of vocational skills /entrepreneurship training	Incomplete support and lack of follow up on the trained youth and women could limit the effectiveness of the vocational skills /entrepreneurship training. Program shall target youth and women to obtain all the support they require and use experienced implementing partners with a mechanism to ensure close follow up	MRH/ GHA/NBSSI	Low
Maintenance Risk	Access to the Road Fund will ensure that funds are available for the operation and maintenance of the road, after completion. However, the Road Fund currently meets only about 50% of the maintenance needs, hence, GoG is exploring various options including increasing the fuel levy and the other road user fees to increase the revenue.	GoG	Medium

4.6 Knowledge Development

4.6.1 The project includes several knowledge products including: i) roads studies to prepare a pipeline of projects for ADFXV lending for Ghana; ii) Economic Sector Work (ESW) on mobility and impact of transport on other services - whose recommendations will be tabled at the biannual Transport Sector Conference; iii) Studies for Gender Sensitive Water and Sanitation system within the project Area to contribute to reduction in open defecation and improve ranking of the beneficiary Districts in the District League Table (DLT); iv) comprehensive study to explore agro-based economic activities that could be optimized using the Staple Crop Processing Zone approach of the Bank and Ministry of Trade and Industry to identify Zones to build upon the transportation network to attract private investors in agri-business. Construction of weighbridges will allow collection of data to determine trends of overloading and will also provide information on transit cargo. The Project also includes dedicated monitoring and evaluation of the projects interventions including baseline studies and monitoring of project's impact over the life of the project. These would be accompanied with video documentary which includes footage of each phase of the project execution to fully capture the transformation of the area through this project intervention. The multi-sectoral project design which anchors on a road infrastructure project is intended to replicate the Fufulso-Sawla model which anchors on a road project to provide series of interventions that meets the needs of users and communities within the project area and maximise developmental impact whilst serving as catalyst for private sector investment. The project therefore provides an opportunity for the Bank to further understand corridor development and management and showcase achievements in instances where trade facilitation and other sector interventions are implemented in tandem with transport infrastructure interventions, as opposed to standalone interventions designed as an afterthought.

5 LEGAL FRAMEWORK

5.1 Legal Instrument

5.1.1 The legal instrument to finance the first phase of the project is an ADF loan agreement for UA 58.3 million to be signed between the Republic of Ghana and the Fund.

5.2 Conditions Associated with the ADF Intervention

Entry into Force of the Loan Agreement

5.2.1 The entry into force of the Loan Agreement shall be subject to the fulfilment by the Borrower of the provisions of Section 12.01 of the General Conditions of the Fund applicable to Loan Agreements and Guarantee Agreements.

A. Conditions precedent to first disbursement:

5.2.2 The obligations of the Fund to make the first disbursement of the loan shall be conditional upon the entry into force of the Agreement and the fulfilment by the Borrower, in form and substance satisfactory to the Fund, of the following conditions:

- (i) the execution and delivery of a Co-financing Agreement on terms and conditions acceptable to the Fund or the submission of evidence that the Borrower has secured financing from alternative sources to cover the financing gap resulting from failure to obtain the Co-financing; and
- (ii) the submission of evidence of the deposit by the Borrower of its counterpart contribution to the Programme in the amount equivalent to Six Million Six Hundred Thousand United States Dollars (US\$ 6,600,000) in an account at a bank acceptable to the Fund.

B. Conditions precedent to disbursement for Works Involving Resettlement

5.2.3 Subject to the Entry into Force of the agreement and the fulfillment of the Conditions Precedent to first Disbursement, the obligation of the Bank to disburse the loan/ for works that involve resettlement shall be subject to the fulfillment by the Borrower of the following additional conditions:

- (a) Submission of a works and compensation schedule prepared in accordance with the Resettlement Action Plan (“RAP”) and the Fund’s Safeguards Policies, in form and substance satisfactory to the Fund detailing: (i) each section of civil works under the Programme, and (ii) the time frame for compensation and/or resettlement of all Project affected persons (“PAPs”) in respect of each lot;
- (b) Submission of satisfactory evidence that all Project affected persons (“PAPs”) in respect of works have been compensated and/or resettled in accordance with the Environmental and Social Management Plan (“ESMP”), the Resettlement Action Plan (“RAP”) and / or the agreed works and compensation schedule and the Fund’s Safeguards Policies, prior to the commencement of such works and in any case before the PAPs’ actual move and/or taking of land and related assets; or
- (c) In lieu of paragraph (b) above, submission of satisfactory evidence indicating that the resources allocated for the compensation and/or resettlement of PAPs have been deposited in a dedicated account in a bank acceptable to the Fund , where the Borrower can prove, to the satisfaction of the Fund that, compensation and /or resettlement of PAPs in accordance with paragraph (b) above could not be undertaken fully or partially, because of the following

reasons: i) the identification of the PAPs by Borrower is not feasible or possible; ii) ongoing litigation involving the PAPs and / or affecting the compensation and/or resettlement exercise; or iii) any other reason beyond the control of the Borrower, as discussed and agreed with the Fund.

C. Other Conditions

The Borrower shall provide evidence, in form and substance satisfactory to the Fund, of the fulfilment of the following conditions:

- (i) Not later than six (6) months after entry into force of this Agreement, evidence of development of a project implementation manual (PIM) to guide technical implementation of the Programme.
- (ii) The Borrower shall take all appropriate measures and actions necessary to ensure that the Environmental Protection Agency (EPA) carries out the monitoring of the construction activities to ensure that the environmental mitigation measures for the Programme are properly applied.

D. Undertakings

The Borrower undertakes the following under the Loan Agreement:

- (i) The Borrower shall, and shall cause the Executing Agency to maintain at all times during implementation of the Programme a Project Coordination Unit (PCU) with the mandate, staffing and resources satisfactory to the Fund. The PCU shall comprise experienced and dedicated staff from the Executing Agency with focal persons from the relevant Ministries, including among others: (i) a project coordinator; (ii) procurement and contracts officers; and technical officers including a project coordinator, a quantity surveyor, an environmentalist, a road safety expert, a project accountant, and an internal auditor.
- (ii) The Borrower shall establish a Project Steering Committee (PSC) to oversee the activities of the Programme and provide strategic guidance and direction. The PSC shall comprise representatives from the main agencies concerned with the Programme including among others: (i) the Ministry of Roads and Highways; (ii) the Executing Agency; and (iii) the Ministry of Finance.
- (iii) To cause the Executing Agency to implement the Programme in accordance with national legislation, the Environmental and Social Impact Assessment (ESIA) and the Environmental and Social Management Plan (ESMP), and report to the Fund on a quarterly basis in a form acceptable to the Fund, on the implementation of the ESIA and the ESMP;
- (iv) To take all appropriate measures and actions necessary to ensure that the Environmental Protection Agency (EPA) carries out the monitoring of the construction activities to ensure that the environmental mitigation measures for the Programme are properly applied.

5.3 Compliance with Bank Policies

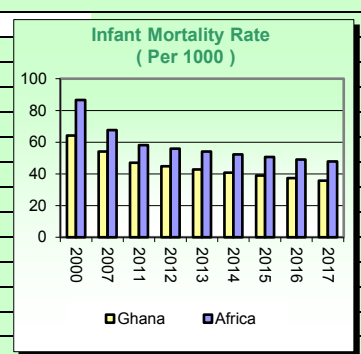
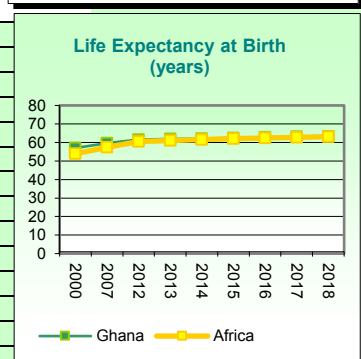
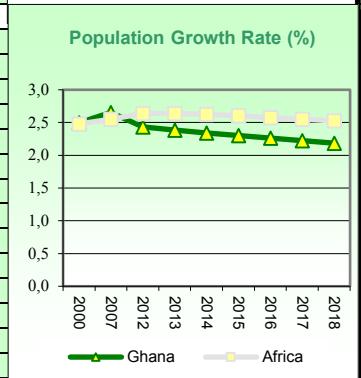
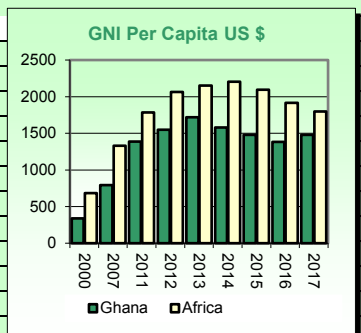
5.3.1 This project complies with all applicable Bank policies.

6 RECOMMENDATION

6.1.1 Management hereby submits this report and recommends that the Board of Directors approve: (i) a Loan of UA 58.3 million from the resources of the Fund to the Republic of Ghana for the purposes and subject to the terms and conditions stipulated in this report; and (ii) the administration of the OFID financing of UA 14.29 (USD 20) million of the Programme.

APPENDIX I: COMPARATIVE SOCIO-ECONOMIC INDICATORS

	Year	Ghana	Africa	Developing Countries	Developed Countries
Basic Indicators					
Area ('000 Km ²)	2018	239	30,067	92,017	40,008
Total Population (millions)	2018	29.5	1,286.2	6,432.7	1,197.2
Urban Population (% of Total)	2018	56.1	42.5	50.4	81.5
Population Density (per Km ²)	2018	128.7	43.8	71.9	31.6
GNI per Capita (US \$)	2017	1 880	1 767	4 456	40 142
Labor Force Participation *- Total (%)	2018	77.1	65.9	62.1	60.1
Labor Force Participation **- Female (%)	2018	75.6	55.5	47.6	52.2
Sex Ratio (per 100 female)	2018	99.4	99.8	102.3	99.3
Human Develop. Index (Rank among 189 countries)	2017	140
Popul. Living Below \$ 1.90 a Day (% of Population)	2007-	12.0	...	11.9	0.7
Demographic Indicators					
Population Growth Rate - Total (%)	2018	2.2	2.5	1.2	0.5
Population Growth Rate - Urban (%)	2018	3.4	3.6	2.3	0.7
Population < 15 years (%)	2018	38.3	40.6	27.5	16.5
Population 15-24 years (%)	2018	19.4	19.2	16.3	11.7
Population >= 65 years (%)	2018	3.4	3.5	7.2	18.0
Dependency Ratio (%)	2018	72.0	79.2	53.2	52.8
Female Population 15-49 years (% of total population)	2018	25.3	24.1	25.4	22.2
Life Expectancy at Birth - Total (years)	2018	63.3	63.1	67.1	81.3
Life Expectancy at Birth - Female (years)	2018	64.4	64.9	69.2	83.8
Crude Birth Rate (per 1,000)	2018	30.0	33.4	26.4	10.9
Crude Death Rate (per 1,000)	2018	7.8	8.3	7.7	8.8
Infant Mortality Rate (per 1,000)	2017	35.7	47.7	32.0	4.6
Child Mortality Rate (per 1,000)	2017	49.3	68.6	42.8	5.4
Total Fertility Rate (per woman)	2018	3.9	4.4	3.5	1.7
Maternal Mortality Rate (per 100,000)	2015	319.0	444.1	237.0	10.0
Women Using Contraception (%)	2018	31.2	38.3	61.8	...
Health & Nutrition Indicators					
Physicians (per 100,000 people)	2010-	9.6	33.6	117.8	300.8
Nurses and midwives (per 100,000 people)	2010-	92.6	123.3	232.6	868.4
Births attended by Trained Health Personnel (%)	2010-	70.8	61.7	78.3	99.0
Access to Safe Water (% of Population)	2015	88.7	71.6	89.4	99.5
Access to Sanitation (% of Population)	2015	14.9	39.4	61.5	99.4
Percent. of Adults (aged 15-49) Living with HIV/AIDS	2017	1.7	3.4	1.1	...
Incidence of Tuberculosis (per 100,000)	2016	156.0	221.7	163.0	12.0
Child Immunization Against Tuberculosis (%)	2017	99.0	82.1	84.9	95.8
Child Immunization Against Measles (%)	2017	95.0	74.4	84.0	93.7
Underweight Children (% of children under 5 years)	2010-	11.0	17.5	15.0	0.9
Prevalence of stunting	2010-	18.8	34.0	24.6	2.5
Prevalence of undernourishment (% of pop.)	2016	6.1	18.5	12.4	2.7
Public Expenditure on Health (as % of GDP)	2014	2.1	2.6	3.0	7.7
Education Indicators					
Gross Enrolment Ratio (%)					
Primary School - Total	2010-	104.8	99.5	102.8	102.6
Primary School - Female	2010-	105.5	97.4	102.0	102.5
Secondary School - Total	2010-	70.0	51.9	59.5	108.5
Secondary School - Female	2010-	69.0	49.5	57.9	108.3
Primary School Female Teaching Staff (% of Total)	2010-	39.7	48.7	53.0	81.5
Adult literacy Rate - Total (%)	2010-	71.5	65.5	73.1	...
Adult literacy Rate - Male (%)	2010-	78.3	77.0	79.1	...
Adult literacy Rate - Female (%)	2010-	65.3	62.6	67.2	...
Percentage of GDP Spent on Education	2010-	6.2	4.9	4.1	5.2
Environmental Indicators					
Land Use (Arable Land as % of Total Land Area)	2016	20.7	8.0	11.3	10.4
Agricultural Land (as % of land area)	2016	69.0	38.2	37.8	36.5
Forest (As % of Land Area)	2016	41.2	22.0	32.6	27.6
Per Capita CO2 Emissions (metric tons)	2014	0.5	1.1	3.5	11.0



APPENDIX II: GHANA - BANK PORTFOLIO APRIL 2019

No.	PROJECT LONG NAME	Loan/Grant Amount	Date of Approval	Closing Date	Status
<u>AGRICULTURE</u>		102,455,781			
1	RURAL ENTERPRISE PROJECT III (L)	26,690,000	19-12-2012	30-09-2020	Non PPP
1	RURAL ENTERPRISE PROJECT III (G)	23,000,000	19-12-2012	30-09-2020	Non PPP
2	FOREST INVESTMENT PROGRAM/ELCRD	3,200,000	22-01-2014	31.12.2019	Non PPP
2	FOREST INVESTMENT PROGRAM/ELCRD****	6,701,031	22-01-2014	31.12.2019	Non PPP
3	SAVANNAH AGRIC. PRODUCTIVITY IMPRVMT PROJECT	27,864,750	15-07-2017	31-03-2023	Non PPP
4	GHANA INCENTIVE - BASED RISK SHARING FOR AGRICULTURE LENDING	10,000,000	26-9-2018		PPP
6	GHANA COCOA SECTOR INSTITUTIONAL SUPPORT PROJECT	5,000,000	11-12-2018		Non PPP
<u>SOCIAL</u>		70,000,000			
7	DEVELOPMENT OF SKILLS FOR INDUSTRY (L)	45,000,000	20-06-2012	31-06-2019	Non PPP
7	DEVELOPMENT OF SKILLS FOR INDUSTRY (G)	25,000,000	20-06-2012	31-06-2019	Non PPP
<u>TRANSPORT</u>		60,000,000			
8	ACCRA URBAN TRANSPORT PROJECT*	60,000,000	28-09-2016	30.06.2021	Non PPP
<u>POWER</u>		49,550,000			
9	ELECTRICITY DISTRIBUTION SYSTEM REINFORCEMENT	28,600,000	26-02-2014	30.10.2019	PPP
9	ELECTRICITY DISTRIBUTION SYSTEM REINFORCEMENT	19,860,000	26-02-2014	30.10.2019	PPP
10	RENEW. MINI-GRIDS & SOLAR STAND ALONE SYS*USD899,800	650,000	4/6/2015	30.06.2019	PPP
11	NET METERED SOLAR PV FOR SMES & LIGHTING- USD610,500	440,000	4/6/2015	30.06.2019	PPP
<u>MULTI-SECTOR</u>		44,780,000			
12	**GHANA INSTITUTIONAL SUPPORT PROJECT	9,590,000	10/9/2012	31.10.2018	Non PPP
13	**STATISTICAL CAPACITY BUILDING (MULTINATIONAL-USD10M))	190,000		21.04.2017	Non PPP
14	**GBS-PUBLIC FIN. MGMT & PRIVATE SECTOR COMPETI	35,000,000	16-12-2016	30.09.2017	Non PPP
<u>WATER/SANITATION</u>		35,950,000			
15	G/A SUSTAIN. SAN. & LIVELIHOOD IMPRV PROJECT	35,950,000	29-03-2017	31.03.2022	
<u>AWF GRANTS</u>		2,043,394			
16	**A BUSINESS APPROACH FOR IMPRVD SANITATION	910,329	16-05-2013	30.08.2017	Non PPP
17	**SOGAKOPE-LOME WATER -Euro1,405,000 (MULTINATIONAL)	1,133,065	18-12-2013	28-02-2019	Non PP

PRIVATE SECTOR		301,277,143			
18	KEMPINSKI ACCRA HOTEL	11,620,000	27-09-2010	29.06.2012	Non PPP
19	TAKORADI II EXP. POWER PROJECT (TICO)	15,300,000	11/7/2012	15.03.2016	Non PPP
20	UT BANK TF LOC (USD20M)	13,800,000	22-05-2013	29.07.2014	Non PPP
21	UNIBANK TFLOC (USD15M)	10,300,000	14-10-2015	22-03-2017	Non PPP
22	GHANA AIRPORTS (USD120M)	85,714,286	30-09-2015	31-12-2018	Non PPP
23	FORM - GHANA (USD10M)	7,142,857	22-09-2016	7.03.2024	Non PPP
23	FORM - GHANA (USD14M)	10,000,000	13-07-2016	07.03.2024	Non PPP
24	CAL BANK (USD40M)	28,500,000	9/7/2018		Non PPP
25	GHL BANK PLC	10,700,000	6/6/2018		Non PPP
26	COCOBOD	72,100,000	27-11-2018		Non PPP
26	COCOBOD	36,100,000	27-11-2018		Non PPP
TRUST FUNDS		1,589,533			
27	GHANA MSME/INVEST IN AFRICA (USD1M)	714,286	27-04-2014	31.12.2019	Non PPP
28	AFRICA CASHEW ALLIANCE (USD451,466)	322,476			
29	AGRIC FAST TRACK/PRACTICAL CARE AGRI (USD115,000)	82,143			
30	BORDERLESS ALLIANCE (USD408,880)	292,057			
31	TECH. SUPPORT FOR MINISTRY OF GENDER (USD250,000)	178,571			
GRAND TOTAL		667,645,851			

APPENDIX III: KEY RELATED PROJECTS FINANCED BY THE BANK AND OTHER DEVELOPMENT PARTNERS

PROJECT TITLE	DONOR	FUND TYPE	USD MILLION
Accra Urban Transport Project (Pokuase Interchange)	AfDB	Loan	83.40
Kumasi Roads and Drainage Extension Project	AFD	Loan	44.00
Transport Sector Improvement Program	WB	Loan	150.00
Ghana Urban Mobility and Accessibility Project	SECO	Grant	6.00
Construction of a New Bridge over the Volta River on the Eastern Corridor	JICA	Loan	100.00
Project for the Improvement of Ghanaian International Corridors (Tema Motorway Roundabout and Trunk Road N8 Phase 2)	JICA	Grant	60.00
Project on Capacity Building for Road and Bridge Management	JICA	Grant	443.40

APPENDIX IV: MAP OF PROJECT AREA



APPENDIX V: DETAILED PROJECT COST TABLE

Project Description - Eastern Corridor (Phase 1)		Total Cost (USD Mil)	Total Cost (UA Mil)	AfDB (UA Mil)	AfDB (USD)	OFID (USD)	GoG (USD)
1) Road Construction Works		87.60	62.54	44.26	62.00	20.00	5.60
A1.	Construct Road Sections 3 & 4 + 2 No. grade separate interchanges + roadside market + physical (10%) + price contingency (5%)	82.00	58.54	44.26	62.00	20.00	-
A2.	RAP & ESIA Implementation & Monitoring	5.60	4.00	0.00	0.00	-	5.60
2) Consultancy Services		7.80	5.57	5.56	7.80	-	-
B1.	Design Review + Supervision Consultancy Service	4.00	2.86	2.86	4.00	-	-
B2.	M & E of Project's Socioeconomic Impact	0.50	0.36	0.36	0.50	-	-
B3.	AUDITS	0.50	0.36	0.36	0.50	-	-
B3.1	Road Safety Audit	0.07	0.05	0.05	0.07	-	-
B3.2	Technical Audit	0.30	0.21	0.21	0.30	-	-
B3.3	Procurement Audit	0.05	0.04	0.04	0.05	-	-
B3.4	Financial Audit	0.08	0.06	0.06	0.08	-	-
B4.	Sensitisation & Campaigns	0.24	0.17	0.17	0.24	-	-
B5.	Project Documentary	0.06	0.04	0.04	0.06	-	-
B6.	STUDIES	2.50	1.78	1.78	2.50	-	-
B6.1	Transport Studies (3 No.)	1.50	1.07	1.07	1.50	-	-
B6.2	Study on establishment of Staple Commodity Processing Zones along the Eastern Corridor	0.50	0.36	0.36	0.50	-	-
B6.3	Studies for Water & Sanitation for the communities	0.50	0.36	0.36	0.50	-	-
3) Project Management & Institutional Support		3.00	2.16	1.43	2.00	-	1.00
C1.	TECHNICAL ASSISTANCE	0.45	0.34	0.32	0.45	-	-
C1.1	Financial Management TA	0.05	0.04	0.04	0.05	-	-
C1.2	Contracts and Records Keeping TA	0.03	0.03	0.02	0.03	-	-
C1.3	Social Safeguards TA	0.12	0.09	0.09	0.12	-	-
C1.4	Project Management TA	0.25	0.18	0.18	0.25	-	-
C2.	Trainings for the PCU	0.25	0.18	0.18	0.25	-	-
C3.	Operations of the PCU	0.35	0.25	0.25	0.35	-	-
C4.	Goods for the PCU	0.63	0.45	0.45	0.63	-	-
C4.1	Equipment and stationery for PCU	0.10	0.07	0.07	0.10	-	-
C4.2	Logistics for the PCU & AfDB Desk	0.53	0.37	0.37	0.53	-	-
C5.	Auxillary Costs of PCU (GoG contribution)	1.00	0.71	0.00	0.00	-	1.00
C6.	ESW Transport Sector Coordination & Conference	0.20	0.14	0.14	0.20	-	-
C7.	Support to AfDB Desk @ MOF	0.13	0.09	0.09	0.13	-	-
4) Community Support		7.40	5.28	5.28	7.40	-	-
D1.	Agro-Industries	1.20	0.86	0.86	1.20	-	-
D1.1	Meat and Fish Processing & Marketing Centre (1No.)	0.60	0.43	0.43	0.60	-	-
D1.2	Multipurpose Agro-processing Platform (2No.)	0.60	0.43	0.43	0.60	-	-
D2.	TVET and Skills Development	0.50	0.36	0.36	0.50	-	-
D2.1	Youth Artesanal & Auto related trainings (500)	0.25	0.18	0.18	0.25	-	-
D2.2	Entrepreneurship and Vocational Trainings (1,000)	0.25	0.18	0.18	0.25	-	-
D3.	Community Infrastructure	5.70	4.07	4.07	5.70	-	-
D3.1	Rehabilitation of basic schools + ICT Centres (15)	3.00	2.14	2.14	3.00	-	-
D3.2	Rehabilitation and equipping of Health Facilities (6)	1.20	0.86	0.86	1.20	-	-
D3.3	Markets (3 No.) + water supply + toilets	1.50	1.07	1.07	1.50	-	-
5) Trade & Regional Integration		0.75	0.54	0.54	0.75	-	-
E1.	Customs related activities	0.25	0.18	0.18	0.25	-	-
E2.	Inter-Agency Coordination	0.25	0.18	0.18	0.25	-	-
E3.	Corridor Coordination Activities	0.25	0.18	0.18	0.25	-	-
Total Project (Base Cost)		106.55	76.08	57.07	79.95	20.00	6.60
Unallocated / Contingency 10% (excl Road Works)		1.72	1.23	1.23	1.72	-	-
TOTAL PROJECT COST (incl. contingencies)		108.27	77.31	58.30	81.67	20.00	6.60