



AFRICAN DEVELOPMENT FUND

PROJECT: FUFULSO-SAWLA ROAD PROJECT COUNTRY: GHANA

PROJECT APPRAISAL REPORT

Date: November 24, 2010

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Currency Equivalents

As of August 2010

Currency Unit = New Ghana Cedis (GHS)

1 UA	=	GHS 2.14126
1 UA	=	USD 1.51852
1 USD	=	GHS 1.41010

Fiscal Year

Jan 1st – December 31st

Weights and Measures

1 metric tonne (t)	=	2,205 lbs
1 kilogramme (kg)	=	2.205 lbs
1 metre (m)	=	3.281 ft
1 kilometre (km)	=	0.621 mile
1 square kilometre (km ²)	=	0.386 square mile
1 hectare (ha) = 0.01 km ²	=	2.471 acres

Acronyms and Abbreviations

AADT	Annual Average Daily Traffic
ADB	African Development Bank
ADF	African Development Fund
AFD	French Development Agency
AfDB	African Development Bank Group
APA	Advance Procurement Action
ARAP	Abbreviated Resettlement Action Plan
CHPS	Community Health Posts Services
CSI	Core Sector Indicators
CSP	Country Strategy Paper
CWSA	Community Water and Sanitation Agency
DBST	Double Bitumen Surface Treatment
DFR	Department of Feeder Roads
DP	Development Partners
DUR	Department of Urban Roads
EA	Executing Agency
ECOWAS	Economic Community of West African States
EIRR	Economic Internal Rate of Return
EPA	Environmental Protection Agency (Ghana)
ESAL	Equivalent Standard Axle Load
ESIA	Environmental and Social Impact Assessment
ESMP	Environmental and Social Management Plan
GAMA	Greater Accra Metropolitan Area
GHA	Ghana Highway Authority
GHS	Ghana cedi (new)
GHFO	Ghana's Field Office
GOG	Government of Ghana
GPRS	Growth and Poverty Reduction Strategy

G-JAS	Ghana- Joint Assistance Strategy
GRF	Ghana Road Fund
GWCL	Ghana Water Company Limited
HDM	Highway Development Model
ICB	International Competitive Bidding
MCC	Millennium Challenge Corporation
MDBS	Multi-Donor Budget Support
MDGs	Millennium Development Goals
M&E	Monitoring and Evaluation
MLGRD	Ministry of Local Government and Rural Development
MoE	Ministry of Education
MoFEP	Ministry of Finance and Economic Planning
MoH	Ministry of Health
MoWAC	Ministry of Women and Children's Affairs
MRH	Ministry of Roads and Highways
MTNDPF	Medium Term National Development Policy Framework
NCB	National Competitive Bidding
NEAP	National Environmental Action Plan
ODA	Overseas Development Assistance
PA	Project Area
PAP	Project Affected People
PCU	Project Coordination Unit
QCBS	Quality Cost-Based Selection
RAP	Resettlement Action Plan
RMC	Regional Member Countries
RSDP	Road Sector Development Programme
SBD	Standard Bidding Document
SC	Sectoral Committees
STI	Sexually Transmitted Infections
TSDP	Transport Sector Development Programme
UA	Unit of Account
VOC	Vehicle Operating Costs
UEMOA	Union Economique et Monétaire Ouest Africaine (West African Economic and Monetary Union)

Grant Information

Client's information

BORROWER:	REPUBLIC OF GHANA
PROJECT TITLE:	FUFULSO-SAWLA ROAD PROJECT
LOCATION:	NORTHERN REGION
EXECUTING AGENCY:	GHANA HIGHWAY AUTHORITY

Financing plan

Source	Amount (million UA)	Instrument
ADF	109.72	Grant
GOG	0.86	Counterpart funds
TOTAL COST	110.58	

ADF's key financing information

Grant currency	Unit of Account
NPV (base case)	US\$ 42.05 million
EIRR (base case)	17.62%

Timeframe - Main Milestones (expected)

Concept Note approval	July 21, 2010
Project approval	November 24, 2010
Effectiveness	March 2011
Last Disbursement	December 2015
Completion (works)	June 2014

Project Summary

Project Overview

1. The proposed project seeks to address development constraints caused by poor road infrastructure in the Northern Region of Ghana, which is the one of the most impoverished and isolated Regions of the country. It aims at constructing the 147.5 km of road between Fufulso and Sawla as well as key socio-economic infrastructure. The primary and direct project beneficiaries of the project include the inhabitants in the immediate vicinity of the road. The other project beneficiaries include diverse stakeholders at local, regional, national and international levels. The estimated project cost, exclusive of taxes and duties, is UA 110.58 million, comprising UA 86.06 million in foreign costs and UA 24.52 million in local costs. The proposed project will be financed by an ADF (UA 109.72 million) Grant and the Government of Ghana (GOG)'s counterpart funds (UA 0.86 million). GOG's contribution will consist essentially of compensation and resettlement costs (UA 0.05 million) and project coordination related costs, amounting to 1% of the total project cost.

Needs Assessment

2. The Fufulso-Sawla road has been earmarked by GOG for upgrading to enhance regional and national integration and indeed has a high priority ranking in the trunk road network of the country. It is an important national road as it is the shortest link in terms of distance between Tamale (the largest city in Northern Ghana and Northern Region Capital) and Wa (the capital of the Upper West Region). This road could play an important role in the development of the area but its current condition severely hampers mobility and access to socio-economic infrastructure. Given the dire needs of the population in the project area in terms of access to and quality of socio-economic infrastructures, an ancillary works component which includes water supply, rehabilitation of schools and health centers, construction of markets and lorry parks, signage and parking for key touristic attractions have also been incorporated into the project.

Added Value for the Bank

3. The Bank's operation will enable GOG to achieve its objective of enhancing accessibility along the Fufulso-Sawla Road and improving livelihoods in the project area of influence. The project design has drawn on the lessons learned from the Bank and other development partners' extensive experience in Ghana, especially in the road transport sector.

Knowledge Management

4. The project includes four main knowledge enhancing activities: i) the construction of permanent weighbridges stations which will allow the collection of data to determine trends of overloading; ii) urban roads studies to prepare for ADF XII lending program for Ghana; iii) infrastructure in support of tourism which mainly consists of signage in the vicinity of the Fufulso-Sawla road as well as construction of a small conservation museum at Mole Park; and iv) a monitoring and evaluation exercise for project impacts. Information on the level of implementation of the different project components will be managed through a relational database. The use of the database will effectively facilitate the management of information with regards to outputs, outcomes and lessons learned.

Result-based Logical Framework

HIERARCHY OF OBJECTIVES	EXPECTED RESULTS	REACH	PERFORMANCE INDICATORS	INDICATIVE TARGETS TIMEFRAME	ASSUMPTIONS / RISKS
<p><u>Sector Goal</u></p> <p>1.1 To provide an integrated, viable and sustainable transport infrastructure to meet the goals of ECOWAS regional integration.</p>	<p><u>Impact – Long Term Results</u></p> <p>1.1 Improved road network</p>	<p><u>Beneficiaries/area</u></p> <p>National territory and ECOWAS zone</p>	<p><u>Indicators</u></p> <p>1.1 a. Proportion of road network in good or fair condition</p> <p>1.1 b. Increase in trade between Ghana and ECOWAS countries</p> <p><u>Sources / Method:</u> National & ECOWAS Statistics, Ministry of Roads and Highways Ministry of Trade and Industry</p>	<p><u>Target</u></p> <p>1.1 a. Increase in the national road network in good and fair condition from 67% in 2008 to 75% in 2014</p> <p>1.1b Increase in nontraditional exports values between Ghana and ECOWAS, from US\$ 365million in 2007 to US\$ 417 million in 2014</p>	<p><u>Assumptions</u></p> <p>1.1a. Efficient implementation of GOG’s Transport Sector Development Programme (TSDP)</p> <p>1.1.b Effective implementation of ECOWAS transport facilitation measures</p> <p><u>Mitigating Measures</u></p> <p>1.1.a Government will maintain commitment towards implementation of the TSDP</p> <p>1.1.b Pursuit of ECOWAS Regional Integration Policy and Transport Facilitation Measures</p>
<p><u>Project Purpose (Objective):</u></p> <p>To enhance accessibility, along the Fufulso-Sawla Road and improve livelihoods in the project area of influence</p>	<p><u>Outcome - Medium Term Results</u></p> <p>Accessibility improved</p> <p>Livelihoods improved</p>	<p><u>Beneficiaries</u></p> <p>Population of Central Gonja, West Gonja, and Sawla-Tuna-Kalba-districts</p>	<p><u>Indicators</u></p>	<p><u>Target</u></p>	<p><u>Risks</u></p> <p>2.1 Insufficient funds for routine and periodic maintenance of the completed road</p>

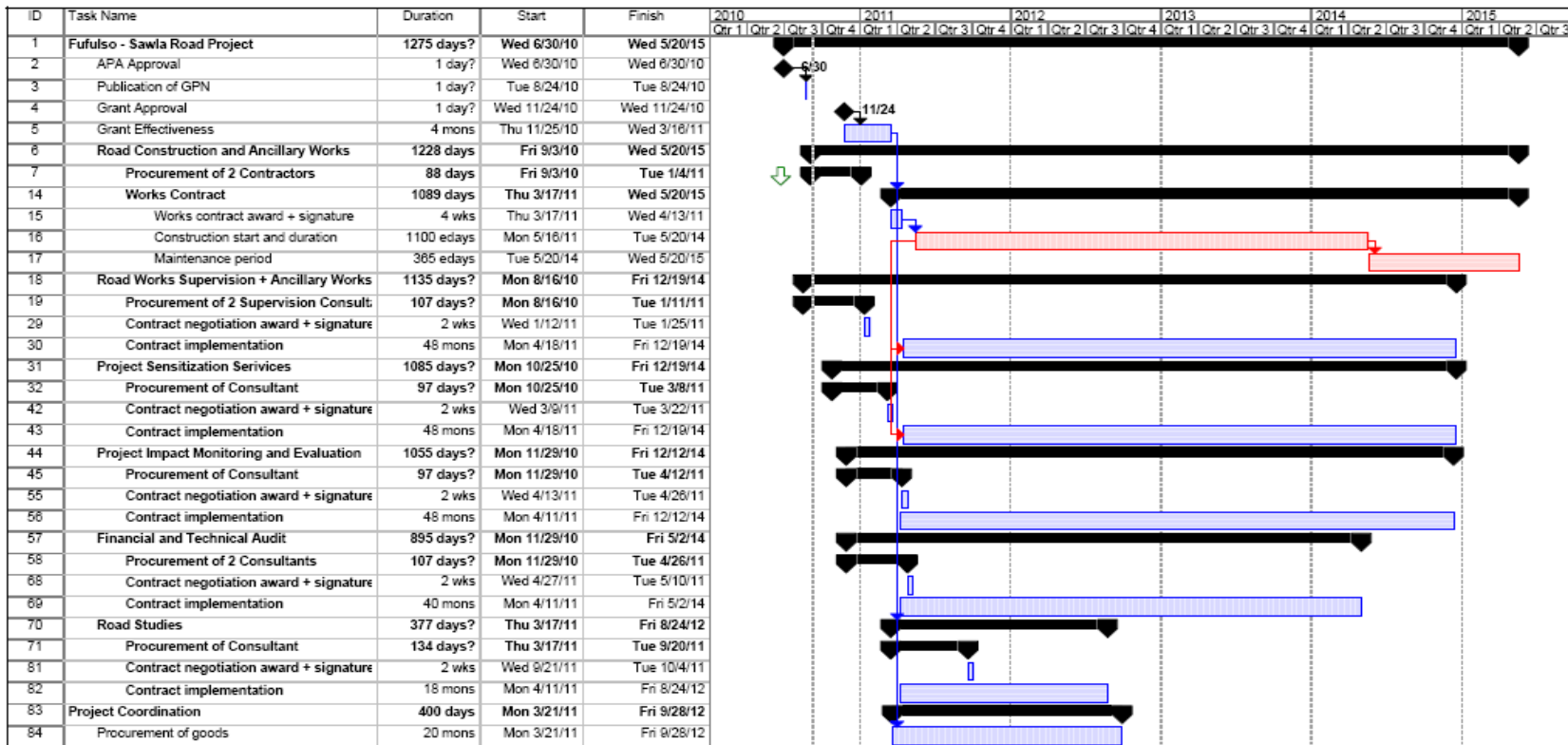
<p>2.1. Fufulso-Sawla Road</p>	<p>2.1.1. Improved access to all-season public transportation within 2 km of their homes</p> <p>2.1.2. Reduced generalized transport costs between Fufulso and Sawla</p> <p>2.1.3. Increased number of tourists visiting the area</p> <p>2.2.1 Axle load control on the road</p> <p>2.1.4. Reduction in traffic mortality along the road</p>		<p>2.1.1 Rural access index in the Northern Region</p> <p>2.1.2a. Vehicle operating costs (VOCs)</p> <p>2.1.2b. Travel time</p> <p>2.1.3a Number of tourists visiting Mole Park</p> <p>2.1.3b Revenues from tourism in Mole Park</p> <p>2.2.1 Percentage of overweight trucks on the road</p> <p>2.1.4 Number of pedestrians and cyclists injured or killed by car on the road</p>	<p>2.1.1 Rural access index increased from 32% in 2010 to 35% by 2014</p> <p>2.1.2a VOC per vehicle km reduced by 30% from U\$0.62/km in 2009 to U\$0.40 /km in 2014</p> <p>2.1.21b. Travel time reduced from 5 hours in 2009 to 3 hours by 2014</p> <p>2.1.3a Number of tourists visiting the Mole Park increased from 14,760 in 2009 to 16,000 in 2014</p> <p>2.1.3b Revenues from tourism in Mole Park increased from GHS 126,762 in 2009 to GHS 139,438 in 2014</p> <p>2.2.1 Percentage of overweight trucks on the road below 4% in 2014</p> <p>2.1.4 Number of pedestrians and cyclists injured or killed by car on the road decreased from 33 in 2009 to 17 in 2014.</p>	<p><u>Mitigating Measures</u></p> <p>2.1.1. GOG's ability to increase Road Fund's revenues (through fuel levy, tolls rates, etc</p> <p>2.1.2 GOG will access Road Funds resources solely for routine and periodic maintenance</p>
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2.2. Ancillary Works	<p>2.2.1 Increased access to potable water</p> <p>2.2.2. Improved access to accident/emergency center</p> <p>2.2.3. Improved market/lorry park infrastructure</p> <p>2.2.4. Increased access to agro-processing equipment and marketing opportunities for women's groups along the road.</p>		<p>2.2.1a. Number of people with access to potable water along the road</p> <p>2.2.2a. Travel time to nearest accident centre</p> <p>2.2.3. Average District Assembly monthly revenues from markets/lorry parks along the road.</p> <p>2.2.4. Average per capita monthly income earned by women from agro-processing activities</p> <p><u>Source/Method:</u> District Assemblies, National Statistics, MRH , GHA, CWSA, National Tourist Board</p>	<p>2.2.1. Number of people with access to potable water increased from 17,400 in 2009 to 34,000 in 2014 (51% of whom will be women) with an attendant reduction of guinea worm cases.</p> <p>2.2.2. Travel time to the nearest accident/emergency center reduced from 6 hours in 2009 to 3 hours in 2014</p> <p>2.2.3. Average District Assembly monthly revenues from markets/lorry parks increased from GHS 500 in 2009 to GHS 625 in 2014.</p> <p>2.2.4. Average monthly per capita income from agro-processing activities increased from GHS 23 in 2009 to GHS 50 in 2014.</p>	<p>Risks 2.2. GOG will not have adequate human and financial resources to sustain the socio-economic infrastructure.</p> <p>Mitigating Measures 2.2.1 GOG's continued support to local and decentralized governments</p> <p>2.2.2 Collection of user fees for select socio-economic facilities by District Assemblies</p> <p>Systematic community participation in the M&E of the project</p>
<p>3. Activities:</p> <p>3.1 Road construction</p>	<p>Short Term Outputs:</p> <p>3.1.1 two-way one lane road from Fufulso to Sawla</p> <p>3.1.2 Lined, earth and cross drainage structures</p>		<p>Indicators</p> <p>3.1.1 Length of Fufulso-Sawla road</p> <p>3.1.2 Length of lined drains and culverts</p>	<p>Target</p> <p>3.1.1 147.5 km of DBST paved road between Fufulso and Sawla by 2013</p> <p>3.1.2 19,300m of lined drains and 2,895m culverts</p>	<p>Risks</p> <p>3.1 GOG does not disburse its counterpart contribution on timely basis</p> <p>3.2 Major price escalation and unforeseen volatility in oil based construction input prices.</p>

3.2 Ancillary Works	<p>3.1.3 two-way one lane access roads and drive ways to socio-economic infrastructure.</p> <p>3.1.4. Sensitization on HIV/AIDS, Guinea Worm, road safety and environmental protection</p> <p>3.1.5. Tree planting</p> <p>3.1.6. Reinstatement of borrow pits</p> <p>3.1.7 Construction of permanent weighbridges stations</p> <p>3.2.1 Boreholes and pipelines</p> <p>3.2.2. Agro-processing Centers for women's groups</p> <p>3.2.3. Rehabilitation of classroom blocks / teachers' quarters/ water and sanitation facilities</p>		<p>3.1.3 Length of access road and drive ways</p> <p>3.1.4a Number of sensitization workshops organized</p> <p>3.1.4b Number of people sensitized</p> <p>3.1.5 Number of trees planted</p> <p>3.1.6 Number of reinstated borrow pits</p> <p>3.1.7 Number of permanent weighbridge station by 2014</p> <p>3.2.1a. Number of boreholes with hand pumps constructed</p> <p>3.2.1b. Number of Motorized boreholes and piped schemes</p> <p>3.2.2. Number of agro-processing centers</p> <p>3.2.3. Number of rehabilitated classroom blocks / teachers' quarters/ water and sanitation facilities</p>	<p>3.1.3 6 km of access road and drive ways completed by 2013</p> <p>3.1.4a. 10 workshops organized by 2014</p> <p>3.1.3b. 24,000 people sensitized (51% women)</p> <p>3.1.4 20,000 trees planted by 2014</p> <p>3.1.6 20 reinstated borrow pits</p> <p>3.1.7 2 Permanent weighbridge stations constructed by 2014</p> <p>3.2.1a. 20 boreholes with hand pumps constructed by 2014</p> <p>3.2.1b. 20 Motorized boreholes and piped schemes constructed/ rehabilitated by 2014</p> <p>3.2.2. Agro-processing centers for 8 women's groups by 2014</p> <p>3.2.3. A total of 7 basic schools rehabilitated by 2014</p>	<p>3.3 Implementation delays</p> <p><u>Mitigating Measures</u></p> <p>3.1 GOG yearly contribution to the project will be deposited by June of each fiscal year in a counterpart account</p> <p>3.2 Provision for price escalation in cost estimates will mitigate effects of oil prices on material costs</p> <p>3.3 Effective monitoring by the Project Coordination Unit</p>
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<p style="text-align: center;">Inputs: <u>Inputs - millions UA:</u></p> <table border="0"> <tr><td>Road Construction Works</td><td style="text-align: right;">76.95</td></tr> <tr><td>Ancillary Works</td><td style="text-align: right;">6.68</td></tr> <tr><td>Studies</td><td style="text-align: right;">1.25</td></tr> <tr><td>Project Management</td><td style="text-align: right;">5.14</td></tr> <tr><td>Compensation and Resettlement</td><td style="text-align: right;">0.04</td></tr> <tr><td>Base Cost</td><td style="text-align: right;">90.06</td></tr> <tr><td>Physical Contingencies</td><td style="text-align: right;">9.01</td></tr> <tr><td><u>Price escalation</u></td><td style="text-align: right;"><u>11.52</u></td></tr> <tr><td>Total Project cost</td><td style="text-align: right;">110.58</td></tr> </table> <hr/> <p>Source of financing (million UA)</p> <table border="0"> <tr><td>ADF Grant</td><td style="text-align: right;">109.72</td></tr> <tr><td><u>GOG</u></td><td style="text-align: right;"><u>0.86</u></td></tr> <tr><td>Total</td><td style="text-align: right;">110.58</td></tr> </table>	Road Construction Works	76.95	Ancillary Works	6.68	Studies	1.25	Project Management	5.14	Compensation and Resettlement	0.04	Base Cost	90.06	Physical Contingencies	9.01	<u>Price escalation</u>	<u>11.52</u>	Total Project cost	110.58	ADF Grant	109.72	<u>GOG</u>	<u>0.86</u>	Total	110.58	<p>3.2.4. Accident Center with Ambulance [rehabilitated / constructed]</p> <p>3.2.5. CHPS Compounds and health posts</p> <p>3.2.6. Markets and lorry parks.</p>		<p>3.2.4. Number of accident centers with ambulance</p> <p>3.2.5. Number of CHPS Compounds and health posts</p> <p>3.2.6. Number of markets and lorry parks.</p>	<p>3.2.4a One Accident Centre constructed and equipped by 2014</p> <p>3.2.4b Two Ambulances for Damongo Hospital by 2014</p> <p>3.2.5. Eight (8) CHPS Compounds constructed by 2014</p> <p>3.2.6. A total of 5 markets with lorry parks (Fufulso, Larabanga, Sawla, Busunu and Damongo) by 2014.</p>	
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Project Timeframe



Project: Implementation Schedule.mpp
Date: Tue 9/7/10

Task		Progress		Project Summary		Deadline	
Project Guide: Critical Task		Milestone		External Tasks			
Split		Summary		External Milestone			

REPORT AND RECOMMENDATION OF THE MANAGEMENT OF THE ADB GROUP TO THE BOARD OF DIRECTORS ON A PROPOSED GRANT TO GHANA FOR THE FUFULSO-SAWLA ROAD PROJECT

Management submits the following Report and Recommendation on a proposed grant of UA 109.72 million to finance the Fufulso-Sawla Road Project in Ghana.

I – STRATEGIC THRUST & RATIONALE

1.1. Project linkages with country strategy and objectives

1.1.1 Ghana's second Growth and Poverty Reduction Strategy (GPRS II) which expired at the end of 2009, is to be replaced by its successor the Medium Term National Development Policy Framework (MTNDPF) 2010-2013 also known as Ghana Shared Growth and Development Agenda (GSGDA). The framework is being finalized and will be formally approved by the end of 2010. The strategic vision of the MTNDPF is to reduce poverty while achieving the Millennium Development Goals within the context of the country's long-term policy objective of achieving middle-income status by 2020 and becoming a leading agro-industrial country. As in the GPRS II, the importance of transport infrastructure is highlighted in the MTNDPF, as an enabler for economic growth and poverty reduction. The transport Sector is a focus area of the MTNDPF whose policy objective is to establish Ghana as a transportation hub for the West African sub-region.

1.1.2 The Bank, in its Medium Term Strategy (MTS 2008-2012) also places a high priority on the Transport sector as a service to the economies of its Regional Member Countries (RMCs). The strategic orientation of the Bank Group's Country Strategy Paper (CSP) 2005-2009 for Ghana, which is articulated around the two pillars of: 'Improving the Investment Environment' and 'Promoting Pro-poor, Pro-gender Equality Policies', fully complies with the Bank's focus on infrastructure. The CSP update is proposing the continuation of the strategic focus of the 2005 – 2009 CSP through the Bank's support of the Fufulso-Sawla road project in 2010. From 2010 up to December 2011, the Bank will continue through the CSP Update, to pursue the objectives articulated under the pillars of the 2005 – 2009 CSP for Ghana as they remain relevant to the government's development priorities, especially in relation to productivity and competitiveness. The proposed Bank financed operation whose objective of enhancing accessibility along the Fufulso-Sawla Road and improve livelihoods in the project area of influence, is included in both the 2005-2009 CSP and the 2010 Update. Thus, the overall thrust of the proposed Fufulso-Sawla road project is to support the improvement of the investment environment through transport infrastructure development. It will contribute to CSP transport objectives of improving trade corridors and accessibility to markets.

1.1.3 The Fufulso-Sawla road has a high priority ranking in the trunk road network of Ghana and has been earmarked by GOG for upgrading to enhance regional and national integration as it is the shortest link in terms of distance between Tamale (the largest city in Northern Ghana and the Capital of the Northern Region) and Wa (the Capital of the Upper West Region). The proposed project road also has regional integration importance as it connects Ghana's gateway towards Ouagadougou, the capital of Burkina Faso with the corridor towards Bobo Dioulasso, Burkina Faso's economic capital. As such, the Fufulso-Sawla road project is included in the Transport Sector Development Programme (TSDP) 2008-2012 which aims at an integrated, efficient, cost-effective and sustainable transportation system supporting growth, poverty reduction and promoting regional integration. The Proposed Fufulso-Sawla project will expand market sizes beyond national boundaries and foster a conducive and enabling environment for the private sector and for attracting foreign direct investments. In addition to enhancing trade and strengthening regional integration, the project will contribute to poverty reduction in both countries by increasing access to markets and social services for the surrounding areas, and

communities, and by empowering the rural poor, women and other disadvantaged groups through adequate roadside socio-economic infrastructure and services.

1.2. Rationale for Bank's involvement

1.2.1 The rationale for the Bank's intervention is fourfold: a) the Ffulso-Sawla road feasibility and detailed design studies which were financed by the Bank, demonstrated high economic viability; b) the main objective of the proposed project which is to address development constraints caused by poor road infrastructure is fully in line with the Bank's and Ghana's strategies which give high priority to the transport sector; c) the proposed project which lies in one of the most impoverished and isolated regions of Ghana, will be beneficial for the development of the whole Northern Ghana as the current road condition affects the full exploitation of the economic potential of the area; d) the upgrading of the road will specifically enhance regional integration and cooperation between Ghana and its Northern neighbours by facilitating cross border international traffic, especially towards Cote d'Ivoire, Burkina Faso, Mali and Niger. This is harnessed by the fact that it will link the Tema-Ouagadougou-Bamako corridor (UEMOA/Ghana Road Program I financed by the Bank) with Ghana's Western Corridor (Elubo – Wa - Hamile road) which goes towards Bobo Dioulasso in Burkina Faso.

1.3. Donors coordination

1.3.1 Donor Coordination in Ghana is achieved through three main arrangements:

- a) *The Multi-Donor Budget Support (MDBS) Framework* signed in March 2003 between GOG and Development Partners (DPs), describes the common framework for the implementation of grant and loan agreements to support the GPRS II. The MDBS framework also includes Sectoral Committees (SC) and Thematic Groups (TG) which feed into the three-year rolling Performance Assessment Framework.
- b) *The Ghana Joint Assistance Strategy (G-JAS) 2007-2010*, which involves the majority of Ghana's DPs and represents about 95% of Overseas Development Assistance (ODA) flows, is the common strategic framework for enhanced donor harmonization and coordination as well as alignment of their development assistance with Ghana's GPRS II.
- c) AfDB, EC and WB launched a *tripartite cooperation process* in June 2008 with Ghana being one of the countries identified to demonstrate the value added that focused collaboration among the three institutions can bring to their client countries in three areas, one of them being infrastructure.

1.3.2 In the Transport sector, donors coordination is quite advanced and there are about 14 Development Partners (DPs) supporting Ghana's road sub-sector. There is an active in-country DPs Transport Sector Group, which holds monthly meetings to coordinate various DP interventions. The European Commission has been designated as the Lead DP for the Transport Sector Group. DPs' interventions stem from components of the Transport Sector Development Programme (TSDP) (2008 - 2012) estimated at USD 4.82 billion, of which US\$ 3.1 billion is allocated to the roads sub-sector. Issues related to transport sector policies and financing of the TSDP are regularly discussed within the Transport Sector Group and are formally reviewed during the annual Transport Sector Development Partners' Conferences. Additionally, the Transport Sector Group is putting forward a number of transport sector reform policy targets within the MDB's Performance Assessment Framework.

1.3.3 The European Commission, World Bank, AFD, Millennium Challenge Corporation (MCC) and the Bank, are major financiers of road projects and work to complement each other. The proposed Ffulso-Sawla Road project will directly complement other DPs' interventions such as the EU financed Kumasi-Techiman project and the World Bank's rehabilitation of the Buipe-Tamale road as well as the construction of bridges in Northern Ghana by Danish International Development agency (DANIDA). The proposed Ffulso-Sawla project has also been included as

a priority project in the EU funded and DP supported Integrated Transport Plan (ITP), which seeks to formulate more effective and integrated demand driven investment plans and strategies for the country's transport sector.

II – PROJECT DESCRIPTION

2.1. Project components

2.1.1 The transport sector goal is to provide an integrated, viable and sustainable transport infrastructure to meet the goals of ECOWAS regional integration. The objective of the Project is to enhance accessibility along the Ffulso-Sawla road and improve the livelihoods in the project area of influence.

2.1.2 The project components are as follows:

Table 2.1: project components

Nr.	Component name	Est. cost (million UA)	Component description
1	Road Construction Works	94.48	<ul style="list-style-type: none"> ▪ Construction of 147.5 km of road between Ffulso and Sawla including lined drains at major settlements along the road; ▪ Environmental and social impact mitigation measures; ▪ Sensitization of project area inhabitants on HIV/AIDS and STIs; malaria and water related diseases; road safety; and environmental protection; ▪ Construction of infrastructure in support to tourism (parking spaces, sign posts along the road and in the Mole National Park, construction of a conservation museum at the entrance of the Mole National park); ▪ Construction of 6 km long access roads and drive ways to socioeconomic infrastructures along the road; ▪ Construction of 2 permanent weighbridges stations; ▪ Works construction supervision
2	Ancillary Works	8.21	<ul style="list-style-type: none"> ▪ Water supply in the communities along the road corridor; ▪ Support to Women's agro-processing activities along the road corridor; ▪ Rehabilitation of existing schools (classrooms, equipment/furniture, sanitation, boreholes, fencing) along the road corridor; ▪ Rehabilitation of existing health facilities: a) Health posts and Community Health Services (CHPS) Compounds (works, equipment and solar panels), b) Construction of an accident center midway of the road (at the existing District Hospital at Damongo and provision of ambulances); ▪ Construction of markets and lorry parks in Larabanga, Busunu, Ffulso, Sawla and Damongo; ▪ Rehabilitation of the grain storage area at Damongo ▪ Design and supervision of ancillary works
3	Studies	1.54	<ul style="list-style-type: none"> ▪ Road Studies
4	Project Management	6.31	<ul style="list-style-type: none"> ▪ Project Coordination ▪ Technical Assistance to the Project Coordination Unit; ▪ Project impacts monitoring and evaluation ▪ Financial and Technical Audit
5	Compensation and Resettlement	0.05	<ul style="list-style-type: none"> ▪ Compensation and resettlement costs for all Project Affected Persons

2.2. Technical solution retained and other alternatives explored

2.2.1 The technical solutions considered for the Ffulso-Sawla road took into account local generated and diverted traffic that will result from the improvement in the road surface condition as suggested by the Origin-Destination (OD) surveys carried out. The project road is in a rural setting and in terms of implementation, is sub-divided into two lots: Lot 1 (Ffulso-Larabanga, km 0+000 to 80+000) and Lot 2 (Larabanga-Sawla, km 80+000 to 147+500). The retained design

solution comprises of the construction to Double Bituminous Surface Treatment (DBST) standard of a 7.3m two way one lane single carriageway plus 2.5m shoulders on each side of the carriageway. As of now, there is no specific plan for the project area regarding the development of ICT infrastructure. Notwithstanding, provision was made in the project design to cater for the installation of protective/service ducts (transverse) for utility services at the settlement areas along the road. The design road pavement consists of 200 mm natural gravel sub-base, 200 mm mechanically stabilized base and a wearing course of double bituminous surface treatment (DBST). The base material is to comprise of 60% to 70% crushed rock and about 30% to 40% sub-base quality lateritic gravel. The existing flooding problems, primarily due to inadequate or non-existent road drainage structures, would be mitigated by the provision of roadside earth drains, lined drains and cross drainage structures (culverts). The design life for the project road is 20 years (more details presented in Technical Annex 5). Other alternative solutions were explored but rejected for reasons outlined in the table below:

Table 2.2: Alternative solutions considered and reasons for their rejection

Design Aspect	Alternative name/Brief description	Reasons for rejection
Geometric Design	<ul style="list-style-type: none"> a) Two lane two way dual carriage for the entire road b) 100kmph design speed 	<ul style="list-style-type: none"> a) The road is a primary one in a rural setting with an average design reliability factor of 85%. Road congestion is unforeseen during design life. This option would thus constitute an over design.; Low EIRR b) Although it would have a positive effect on journey/travel time, the benefit is outweighed by the increase in cost and thus maintenance that would be required for the wider curve radii and therefore land take and its effects on the environment particularly the national park and other heritage/cultural sites. The higher design speed (with higher travel speed) could also impact negatively on road safety.
Pavement & Drainage	<ul style="list-style-type: none"> a) Use of AC (Asphalt Concrete) wearing course b) Lined drains along the entire road alignment c) Alternative road base materials 	<ul style="list-style-type: none"> a) This would represent an over design for this class of road. The cost of this option was also a limiting factor in light of the current and projected traffic levels. Towards the end of the design life of the project an AC overlay could be applied should the level of traffic and cost of doing such warrant it. b) Overdesign for the road as well as cost considerations. The retained solution of lined drains in the settlement areas and earth drains in other sections is optimum considering the project location and its hydro-geological properties. c) Lime stabilized and cement stabilized base materials were considered but were discounted due to their cost implications. The cost differential between the retained solution (mechanically stabilized base) and these options ranged between 31% and 46% in terms of overall project cost.
Design for cyclists	<ul style="list-style-type: none"> a) Dedicated cycle way 	<ul style="list-style-type: none"> a) Considered an overdesign as the retained design provides 2.5m shoulders for pedestrian and cyclists use

2.3. Project type

2.3.1 This project is a stand-alone operation to be financed by the Bank and GOG. All of the DP operations in the road transport sector are carried out using this type of operation (investment projects) using either a programme or project approach.

2.4. Project cost and financing arrangements

2.4.1 The estimated project cost, exclusive of taxes and duties, is UA 110.58 million, comprising UA 86.06 million in foreign costs and UA 24.52 million in local costs. The works' unit costs were determined taking into account: (i) GOG 2010 updates of the detailed design study; (ii) the outcomes of the recent invitations to bid for works financed by ADF and other DPs in Ghana; and (iii) the recommendations of the 2008 Bank's study on the unit costs of road works, which is

detailed in Annex 11. Detailed estimated project costs, by component and expenditure category, are presented in detail in Annex 3 and are summarized in Tables 2.3-2.8 below.

Table 2.3: Project cost estimates by component (million UA)

Components	FE (million UA)	LC (million UA)	Total (million UA)	% foreign
Road Construction Works	61.39	15.56	76.95	80%
Ancillary Works	4.30	2.38	6.68	64%
Studies	1.00	0.25	1.25	80%
Project Management	3.39	1.74	5.14	66%
Compensation and Resettlement	0.00	0.04	0.04	0%
Total Base Cost	70.09	19.97	90.06	78%
Physical Contingencies	7.01	2.00	9.01	
Price Escalation	8.96	2.55	11.52	
Total Project Cost	86.06	24.52	110.58	78%

Table 2.4: Project cost by category of expenditure (million UA)

Category	FE (million UA)	LC (million UA)	Total (million UA)	% foreign
Works	62.04	16.85	78.89	79%
Services	7.54	2.74	10.28	73%
Goods	0.17	0.01	0.18	95%
Miscellaneous	0.33	0.37	0.70	47%
Total base cost	70.09	19.97	90.06	78%
Physical Contingencies	7.01	2.00	9.01	
Price Escalation	8.96	2.55	11.52	
Total Project Cost	86.06	24.52	110.58	78%

Table 2.5: Expenditure schedule by component (million UA)

Component	2011	2012	2013	2014	2015	Total
Road Construction Works	18.90	33.04	33.04	9.50	0.00	94.48
Ancillary Works	0.51	3.07	3.15	1.47	0.00	8.21
Studies	0.61	0.77	0.15	0.00	0.00	1.54
Project Management	0.39	1.55	1.50	1.50	1.36	6.31
Compensation and Resettlement	0.05	0.00	0.00	0.00	0.00	0.05
Total Project Cost	20.46	38.43	37.85	12.47	1.36	110.58

2.4.2 The proposed project will be financed by ADF (UA 109.72 million) and GOG (UA 0.86 million). As Ghana which has been reclassified to benefit from loans and grants over the whole 3 years period of ADF XI, has consumed the loan portion in the initial part of the cycle, the country balance of ADF XI allocation in 2010 amounting to UA 109.72 million shall be in the form of grants only. Furthermore, as it was done for the 2009 ADF approved Ghana Awoshie-Pokuase Road project, it is proposed that Ghana counterpart funds be minimized as well as for the Ffulsulso-Sawla road project, in accordance with section 4.2.2 of the Bank's Policy on Expenditure Eligible for Bank Group Financing, revised version of 19th March 2008 (see details in technical annex 3 A). From a sector specific perspective, counterpart funding requirements for capital

investment projects pose a risk of distracting Government resources away from maintenance activities. That is one of the reasons why the major DPs, have in the recent past agreed to finance 100% of roads construction projects in Ghana in order to support GOG's efforts towards clearing the road maintenance backlog. As a result, GOG has consistently increased its commitments to maintenance works over the years and in early 2010, GOG paid GHS 160 million being arrears owed to local and foreign road contractors in the country. From the foregoing and at the request of GOG, it is proposed that GOG's counterpart funds be limited to 1% (UA 0.86 million) of the total project cost to meet the ADF non-eligible expenditures consisting of essentially compensation and resettlement and project coordination related costs.

Table 2.6: Sources of Finance (million UA)

Source	FE (million UA)	LC (million UA)	Total (million UA)	% of Total Project Cost
ADF Grant	85.66	24.07	109.72	99%
GOG	0.40	0.45	0.86	1%
Total Project Cost	86.06	24.52	110.58	

Table 2.7: Project cost by category of expenditure (ADF only) (million UA)

Category	FE (million UA)	LC (million UA)	Total (million UA)	% foreign
Works	62.04	16.85	78.89	79%
Services	7.54	2.74	10.28	73%
Goods	0.17	0.01	0.18	95%
Total base cost	69.76	19.60	89.36	78%
Physical Contingencies	6.98	1.96	8.94	
Price Escalation	8.92	2.51	11.43	
Total Project Cost	85.66	24.07	109.72	78%

Table 2.8: Expenditure schedule by component ADF only (million UA)

Component	2011	2012	2013	2014	2015	Total
Road Construction Works	18.90	33.04	33.04	9.50	0.00	94.48
Ancillary Works	0.51	3.07	3.15	1.47	0.00	8.21
Studies	0.61	0.77	0.15	0.00	0.00	1.54
Project Management	0.27	1.35	1.30	1.30	1.28	5.50
Compensation and Resettlement	0.00	0.00	0.00	0.00	0.00	0.00
Total Project Cost	20.29	38.23	37.65	12.27	1.28	109.72

2.5. Project's target area and population

2.5.1 The 147.5 km long Fufulso-Sawla Road traverses three districts in the Northern Region of Ghana. These are the Central Gonja, West Gonja and the Sawla-Tuna-Kalba districts. With the exception of the Central Gonja district which has only its third largest town along the road, the capital towns of the West Gonja and the Sawla-Tuna-Kalba districts are traversed by this road. The road corridor's immediate vicinity is inhabited by an estimated population of 30,000; of whom 50.8% are women. These will constitute among others, the direct beneficiaries of the project. Other beneficiaries are people from other parts of the Northern Region, traders and road transport operators and travelers from the Upper East and West Regions as well as Burkina Faso, Mali and Niger.

2.5.2 The Ffulso-Sawla road could play an important role in the development of the area but its current condition severely hampers mobility and access to socio-economic infrastructure. At present, it is only gravel surfaced and is extensively corrugated with most sections unmortorable particularly during the raining season. Public and private transport is minimal and most of the time not available due to the road's poor condition. With the current condition of the road, it takes between 5 to 8 hours to travel from Ffulso to Sawla whereas it should normally take a maximum of 2 hours.

2.5.3 The road traverses an important agricultural area which accounts for over 25% of total food production in the Northern Region of Ghana. Located along the road corridor are some of Ghana's important tourist sites such as the Mole National Park, the Larabanga Historic Mosque and the Mystic Stone.

2.5.4 Despite their vast resources and potential, the three districts along the road corridor are amongst the most deprived areas in Ghana. Only about 30% of households along the road have access to safe water. This is far below the Northern Regional average and the national average of 57.97% and 57.14% respectively. Majority of households rely on unsafe water sources such as dug-out dams for drinking water, most of which dry-up during the dry season. This has contributed to a high prevalence of water-borne diseases in the project area. Ghana is second to Sudan globally in guinea worm prevalence. Of the 242 guinea worm cases recorded in the country in 2009, 237 cases were from the Northern Region of which the Central Gonja district alone accounted for 148 cases; (97% of which were recorded in Ffulso).

2.5.5 The bad nature of the main road is also a deterrent to recruiting and retaining many health, education and other sector professionals for posting to those districts. The three districts along the road have only one medical doctor based in Damango. The districts have on average, a doctor – patient ratio of 1: 29, 394 which is far below the national ratio of 1: 10,380. The poor condition of the road as well as scarcity of well-functioning community health care is a barrier to physical accessibility of socio-economic infrastructure and a constraint to quality of health service delivery.

2.5.6 Educational infrastructure in many communities along the road are either inadequate or in a deplorable state with some classes held under sheds and trees. Net primary school enrolment is moderate with an average of about 65%. This is still below the regional average of about 72%, the national average of about 84% and the MDG target of 100% by 2015.

2.5.7 Given the dire needs of the population along the Ffulso-Sawla Road in terms of access to and quality of socio-economic infrastructure, an ancillary works component has been incorporated into the project. In addition, the project will build and rehabilitate key socio-economic infrastructures such as boreholes, schools (rehabilitation), Community-Based Health Planning and Services (CHPS) and an accident center, markets and lorry parks, as well as access roads to health centers and touristic attractions. These key socio-economic infrastructures have been retained under the Proposed Project, based on priorities identified by the concerned communities and their representatives.

2.6. Participatory process for project identification, design and implementation

2.6.1 The project formulation process involved consultations with various stakeholders during the initial Environmental and Social Impact Assessment done in 2003 and its update in 2010. Additional public consultations were held during the project preparation and appraisal missions.

2.6.2 These consultations were meant to: (i) present the road project to the stakeholders; (ii) seek their views and concerns with regards to the project's impacts and; (iii) identify key activities that could contribute to complement the design of the project. Public consultations were held in selected communities including Ffulso in the Central Gonja district, Damango and

Larabanga in the West Gonja district and at Sawla in the Sawla-Tuna-Kalba district. Each meeting attracted a minimum of 60 participants (about 40% of whom were women) drawn from the District Assembly, other relevant district level government agencies, women's groups, youth groups, civil society, chiefs and elders of the community. The District Chief Executives for Central Gonja, West Gonja and Sawla-Tuna-Kalba (the political and administrative heads of the districts) were present at the consultative meetings held in their respective districts.

2.6.3. At the country level, consultations carried out mainly during the preparation and appraisal missions involved relevant government agencies and DPs. At the regional level, the project team consulted with senior staff of the Northern Regional Coordinating Council, Regional Directors of relevant government agencies (Ghana Health Service, Ghana Education Service, etc), the Ghana Private Road Transport Union (GPRTU) and representatives of Civil Society Organisations.

2.6.4 In May 2010, consultations were also held with PAPs. Key issues discussed include: (i) the proposed road alignment; (ii) effects of project on properties falling within the right of way (ROW); (iii) pedestrian-vehicular conflicts during construction and operation; (iv) resettlement and compensation process. Minutes of these consultations are attached to the ESIA and the ARAP.

2.6.5. All stakeholders were supportive of the project because current condition of the Ffulso-Sawla road severely hampers mobility and access to socio-economic infrastructure in the area which is one of the most impoverished and isolated areas of the country. Key concerns raised by stakeholders particularly in the project area dealt with the need: (i) to minimize the negative impacts of road construction on the local population such as dust pollution, destruction of farmlands/houses, road accidents and HIVAIDS; (ii) to involve local communities during project implementation; iv) to include construction/rehabilitation of socio-economic infrastructure in the project.

2.6.6. The project has incorporated specific design features in response to the concerns raised by stakeholders. These include: (i) inclusion of mitigation measures such as road safety awareness, HIV/AIDS sensitization, speed calming devices, control of dust pollution, tree planting and reinstatement of borrow pits; (ii) introduction of a project component on ancillary works to support development of socio-economic infrastructure along the road; (iii) proposal for introduction of clauses in contractors (works) contracts on recruitment of local labour; (iv) involvement of community members in Monitoring and Evaluation. Periodic participatory Monitoring and Evaluation workshops will be organized by the project impacts consultant in order to discuss results with all stakeholders group. Representatives of local communities will also participate in project inspection/site meetings.

2.6.7. The project team briefed and consulted also with road sector donors to understand their current and pipeline projects in the sector and to discuss implementation challenges. The aim was to enhance lesson learning and ensure harmonization of practices in the road sector.

2.7. Bank Group experience, lessons reflected in project design

2.7.1 The Bank's lending activities in the transport sector have been relatively significant. Since 1981, the Bank has financed eight road projects, one railway project, four road studies, and one Multinational project (UEMOA-Ghana road Program I) in addition to supplementary loans to three currently ongoing road projects; all totalling UA 258 million, comprising of loans and grants.

2.7.2 Ghana's road transport portfolio has in the recent past suffered from the following problems: i) substantial delays in project start up (loan signature/entry into force and fulfillment of loan conditions); ii) cost overruns caused by substantial design reviews and procurement

delays; iii) inadequate project management capacity of the implementing agency (Ghana Highway Authority, GHA; iv) delays in processing payments to contractors.

2.7.3 In order to improve the portfolio, the ongoing road projects have been under intense supervision. The Bank conducts quarterly supervision missions and engaged the services of a monitoring and evaluation consultant to conduct month progress reviews/site visits and report on progress on a monthly basis. The PCRs for three recently closed projects were completed in 2009. As the issues which constrained the implementation of Bank-financed ongoing road projects in the country have been tackled and ongoing road works are progressing relatively well (earthworks are completed and pavements works have commenced on all the 4 sites with average physical progress of 50%), a new road operation can be envisaged. Disbursements under the works contracts at present average 45% while average loan disbursement rate is 35% (vs 7.17% in May 2009). Lessons learned from the Bank and other DPs' experiences in Ghana have been reflected in the design of the proposed Ffulso-Sawla road project. Lessons learned were drawn from many sources, including the Bank's experiences, consultations with DPs, GOG, etc. The specific problematic issues and the mechanisms deployed in the design of this project to mitigate and/or eliminate them are as follows:

- i) *reducing delays in project startup*: GOG internal approval process for grant signature and entry into force will be initiated right after the negotiations. This will enable the GOG internal grant signature and entry into force to take place soon after Board approval. Furthermore, there have been deliberate efforts from OITC to minimize loan conditions by resolving as much as possible, prior to the Negotiations, issues that could potentially be included as conditions. During the appraisal, actions to be carried out in order to facilitate the presentation of the project to the Board of Directors were notified and agreed with GOG. As a result, only one issue remains unresolved (relating to the payment of compensation to PAPs) and is included as condition precedent to first disbursement. It is therefore expected that the grant will disburse in early 2011;
- ii) *avoiding cost overruns caused by substantial design reviews and procurement delays*: The Ffulso-Sawla Road studies (financed by the Bank in 2003) were concluded in 2007 and updated in 2010. As Advanced Contracting was granted by the Bank for this project, procurement activities have already started. It is expected that the Ffulso-Sawla road works contract will be signed in January 2011 (during the dry season). Moreover, there would be no design reviews as GOG has officially validated the Ffulso-Sawla road design;
- iii) *mitigating GHA's inadequate project management capacity*: Past and recent experiences with road projects in Ghana have demonstrated the need for a dedicated Project Coordination Unit (PCU) type of institutional setup. A dedicated PCU has been established within the existing government structure, to ensure smooth project implementation and minimize procurement and disbursement delays. GOG has already nominated PCU members. Furthermore, a technical assistance in procurement and project monitoring will be provided to the PCU through the proposed project. An incentive-based KPIs contracts for all the individual staff members comprising the PCU as well as the technical assistants is also proposed. The performance indicators will include processing time of payment certificates, processing time for procurement related activities and effectiveness of project monitoring/contract enforcement;
- iv) *reducing delays in payments to contractors*: On average, processing Interim Payment Certificates (IPCs) within GHA takes about 2 to 3 months. Such delays negatively affect contractors' cash flows with the consequent effect on performance and cause GOG to incur additional cost of interest on delayed payments. It was therefore agreed that the Project Coordination Unit (PCU) which was formed to manage all the AfDB financed trunk road projects would have the main responsibility for the processing of the IPCs. Following discussions with GOG and at the instruction of the Vice President of the

country, a memorandum to that effect was presented to Cabinet meeting in October 14, 2010. Furthermore, MRH recently issued a new directive which will streamline IPCs processing throughout GHA and the ministry.

2.8. Key performance indicators

2.8.1 The project outcomes focus on the Bank’s Transport related Core Sector Indicators (CSI), i.e. improved access to all-season public transportation within 2 km of the project beneficiaries residences, reduced generalized transport costs between Ffulso and Sawla, reduction in traffic mortality along the road. The other project outcomes relates to CSI from different sectors such as Water, Health, Education and Social Protection. These indicators include increased number of tourists visiting the project area, axle load control on the road, increased access to potable water, increased access to primary education schools, improved access to accident/emergency center, improved market/lorry park infrastructure, increased access to agro-processing equipment and marketing opportunities for women’s groups along the road. Baseline data for these indicators will be reviewed and refined at start of project. Where relevant, the indicators will be disaggregated by gender. Progress made in achieving these outcomes will be tracked through supervision reports by the supervising consultant and data collection at project inception, mid-term and completion by the project’s impact monitoring and evaluation consultant who is funded under the proposed project. Progress will also be informed by qualitative assessments emerging from the continuous stakeholder consultation process that is incorporated throughout the project. In addition, it is expected that post project impact assessments will be conducted one to two years after project completion.

III – PROJECT FEASIBILITY

3.1. Economic and financial performance

3.1.1 The methodology used for the economic analysis was conducted through the standard methodology of cost benefit analysis comparing the situations “with” and “without” project scenarios over a period of 20 years. HDM-IV model was used in the analysis in order to estimate the Ffulso-Sawla road project viability through the Economic Internal Rate of Return (EIRR). The calculation of the EIRR is based on the estimated levels of traffic, economic costs and benefits of the projects. The economic costs of the projects were assessed to include costs for capital investment as well as construction routine and periodic maintenance costs. The actualized project benefits such as Vehicle Operating Cost (VOC), travel time saving, and salvage value were also inputted in HDM.

3.1.2 The project is economically viable since the overall EIRR is 17.62% and remain equal or more than 12%, which is the opportunity cost of capital in Ghana, in all cases of sensitivity analysis. Table 3.1 below gives a summary of the economic analysis, whose details are presented in Annex A4.

Table 3.1: Key Economic and Financial Figures

EIRR (base case)	17.62%
NPV (base case)	US\$ 42.05 million
EIRR (10% decrease in benefits)	14.52%
EIRR (10% increase in costs)	14.8%
EIRR (10% decrease in benefits & 10% increase in costs)	12.06%
Discount rate	12%

3.2. Environmental and Social impacts

Environment

3.2.1 This project has been classified as a Category 1 project in accordance with the Bank's rules and procedures. A full Environmental and Social Impact Assessment (ESIA) report, an Environmental and Social Management Plan (ESMP) and an Abbreviated Resettlement Action Plan (ARAP) were prepared in May 2010 in accordance with applicable Bank policies. The summary of the ESIA and the ARAP were posted on the Bank's web site on June 9, 2010. The Environmental Permit was issued by the Ghana Environmental Protection Agency (EPA) on August 19th, 2010. The major direct adverse environmental impacts of the project include: (i) noise and dust from the earth works; (ii) loss of flora and fauna; (iii) soil erosion and siltation of watercourses; (iv) expropriations; (v) increase in road accidents. The construction of the road could potentially disturb the Larabanga Mystic Stone and Jentilpe Mass Grave which are cultural sites located not far away from the road ROW. Operators of dozers and other road construction equipment with no knowledge of the area could trample on these sites. Furthermore, the influx of migrant workers during construction, the transit of long distance drivers when the road is completed and in use and the possible influx of commercial sex workers into the area would increase vulnerability to sexual exploitation, HIV/AIDS and other STIs along the road corridor.

3.2.2 Mitigation measures include: (i) dust suppression by watering and restriction of construction activities to day-time; (ii) minimal removal of vegetation combined with tree planting; (iii) provision of speed humps; (iv) environmental protection campaigns in schools and communities around the Mole National Park (MNP) and along the road; (v) provision of appropriate signage in and around the MNP; (vi) provision of appropriate drainage facilities; (vii) creation of an island to preserve the Larabanga Mystic Stone and tree fencing of the Jentilpe Mass Grave; (viii) sensitization campaigns on HIV/AIDS, road safety and water borne diseases for the communities along the road; (ix) payment of compensation to Project Affected People (PAP). The cost of the above-mentioned environmental and social mitigation measures including monitoring is estimated to GHS 900,000.

3.2.3 The project's main positive environmental impacts include: (i) environmental awareness; (ii) air quality (dust) improvement; (iii) erosion and siltation control; (iv) reduction of the incidence of water borne diseases as well as respiratory disorders; (v) improved carbon sequestration in agro-ecosystems. These positive impacts will primarily benefit communities living along the road corridor and around the Mole National Park. More details on environmental impacts and mitigation measures are given in technical annex 9.

Climate Change

3.2.4 The proposed road design incorporates various considerations aimed at adapting to climate change especially to extreme events such as droughts and floods in the project area: (i) selection of appropriate type of pavement; (ii) proper design and rehabilitation of drainage facilities; (iii) proper level of road embankment; (iv) provision of dugouts and boreholes where appropriate.

3.2.5 Although there is no baseline data on CO₂ emission in the project area, it is expected that in the long run, CO₂ emission into the atmosphere will increase due to an increase in traffic on the road. Measures aimed at mitigating climate change include: (i) planting of 20,000 trees made of various indigenous species; (ii) proper reinstatement of borrow pits; (iii) minimizing of bush clearing during the construction works; (iv) sensitization of communities and youth on climate change related topics such as bush fires and conservation agriculture.

Gender

3.2.6 Agriculture is the primary source of income for inhabitants along the road corridor. Earnings from this sector is largely controlled by men though women provide a bulk of the farm

labour and are often the ones who cart farm produce to the markets for sale. The road would open up the area and improve access to agricultural inputs and markets. This will boost agricultural production and farmers' incomes, particularly the men. Due to its bad nature transportation along the road is largely by head portage and bicycles. When completed, the road would increase vehicular traffic and lighten the burden on women.

3.2.7 Women along the road corridor derive their income from petty trading and agro-processing. The road project includes the reconstruction of four existing markets to promote trading activities. The design of these markets includes separate wash rooms for men and women and storage places. With the new market structures, District Assemblies along the road could increase their revenue from market tolls by up to 25%. This is an additional income that would be used for other pro-gender development projects in the districts. The project will also provide agro-processing equipment to selected women's agro-processing groups. This would reduce drudgery in the processing of cassava, sheanuts and groundnuts into gari, shea-butter and groundnut oil respectively. The use of technology would save time, energy and enhance the value of the products. The demand for the processed products exists in Tamale (the regional capital) and other major cities across the country and the use of technology could increase output, save time and improve the quality of the finished products. The profit margins and incomes of the affected women would increase as a result.

3.2.8 The project also includes rehabilitation of selected basic schools along the road corridor. The provision of school-based water and sanitation facilities would improve personal hygiene and convenience especially for teenage girls. The project would also provide boreholes in selected communities along the road. While reducing the incidence of water borne diseases, improved access to potable water would cut down on the time women and girls spend to collect water. The construction of Community-Based healthcare facilities would enhance primary health care, reduce the morbidity rate and the time women would spend caring for the sick. The road construction work would create temporal job avenues for women and girls who would sell food and merchandise or work as unskilled labour on the sites. Young unemployed men would benefit most from these jobs. The expected overall increase in economic activity in the area will improve incomes for men and women and promote economic empowerment of both sexes. This could improve gender relations and women's contribution and voice.

Social

3.2.9 The current condition of the Ffulso-Sawla Road impedes accessibility to and within the area, resulting in a high level of deprivation. The construction of the Ffulso - Damongo - Salwa road, will facilitate the transportation of agricultural produce to boost socio-economic activities. The rehabilitation of the main grain storage area will also help reduce post-harvest losses. 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. 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 40 hand pumped/ motorized boreholes in selected communities along the road.

3.2.10 Key road safety measures have been incorporated in the project since improvements in the Ffulso-Sawla road condition may lead to a rise in road traffic accidents (injuries and fatalities). Road crashes kill an average of four persons daily in Ghana. About 70% of crashes occur on flat and straight roads. Speeding is a major cause of crashes, accounting for over 50% of reported crashes. Pedestrians continue to be the most vulnerable road user group, accounting for more than 40% of the annual road crash fatalities. In 2009 alone, the number of pedestrians and cyclists

injured or killed by car on the quite flat but non motorable Fufulso-Sawla road was 33. Without any mitigation measures, the number of fatalities and injuries will significantly increase with the increase in traffic and speed brought by the improvement of the road condition. The project has therefore included the following mitigation measures on both the accident prevention and care fronts: i) accident prevention: the Fufulso-Sawla road design includes speed calming devices and signage on approach to all settlements and at the vicinity of the Mole park (to avoid crashes with animals). During project implementation, several road safety awareness campaigns will be organized in partnership with Ghana's Road Safety Commission; ii) trauma care: the construction of an equipped accident center attached to the Damongo District Hospital along with provision of two ambulances in order to ensure urgent medical attention to accident victims. The lorry parks to be provided under the proposed project will also serve as rest stops for drivers in transit, this would be an added benefit for road safety as tiredness/fatigue has been identified as one of the main contributory factors to road traffic accidents.

3.2.11 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 200 jobs for men and women particularly the youth. Mitigation of possible negative impact such as dust pollution has been addressed in the ESMP. In addition, an 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 discussed below would enable the affected people to recover from their losses.

Involuntary resettlement

3.2.12 The Fufulso-Sawla road project will follow the alignment of the existing gravel road; that is why despite the road length, the project will affect 43 owners of 22 permanent structures (Swish buildings and kiosks), 15 wooden sheds, 3 kiosks, 1 wooden structure and 2 economic trees. The properties that will be affected are located in Fufulso, Busunu, Tailoipe and Larabanga. Efforts were made to ensure that no major social and historical infrastructures would be affected and that clearing of Right of Ways especially in settlements along the road does not go beyond the limits mentioned in the approved design. The ARAP was prepared and posted on the Bank's website on June 9, 2010 in accordance with the Bank's policy on involuntary resettlement. Compensation and resettlement cost for all PAPs have been estimated at GHS 100,350 to be paid by GOG.

IV – IMPLEMENTATION

4.1. Implementation arrangements

4.1.1 The executing agency for the project will be Ghana Highway Authority (GHA), which is responsible for the trunk road network in Ghana. GHA has its head office in Accra and regional offices in all ten (10) administrative regions of the country each headed by a regional director. GHA is the implementing agency for all four (4) ongoing Bank financed projects in Ghana. It also has significant experience in implementing donor funded trunk road projects including those financed by the World Bank, AFD and OFID amongst others. GHA will have direct responsibility for project management (including procurement, safeguards management, financial management, and monitoring and evaluation). In order to ensure smooth project implementation and minimize procurement and disbursement delays a dedicated PCU was established within GHA for the four ongoing Bank financed trunk road projects and the proposed Fufulso-Sawla

road project. The PCU whose members have been already nominated by GOG is composed of a Project Coordinator (GHA), an Accountant (GHA), 2 Quantity Surveyors (GHA), an Environmental and Safety Officer (GHA) as well as a representative of the Ministry of Roads and Highways (MRH) and the Ministry of Finance and Economic Planning (MOFEP). Furthermore, a technical assistance/civil engineering consulting firm will be provided to the PCU in order to smooth day-to-day management of all the Bank financed road projects. This technical assistance which will be composed of a full-time Project Manager and financial management, procurement and road engineering experts on a need basis, will be financed by ADF. Furthermore, in order to shorten delays in processing Interim Payment Certificates (IPCs), GOG through Cabinet Memorandum and an MRH directive has given the power to the PCU to process payments certificates. This would streamline the payment process to a maximum duration of 20 working days (whereas it used to require a time-lag of 3 months).

4.1.2 The key PCU staff as well as the technical assistant will be expected to sign a performance contract with GOG. The terms of reference and the key performance indicators of the contract will be subject to the Bank's no-objection. The performance contract will comprise amongst others, indicators such as rate of physical implementation, disbursement rates, IPC processing duration/time, the timely submission of progress and audit reports as well as the implementation of recommendations from supervision missions and audit reports. The performance of the PCU staff will be monitored regularly. GHA will carry out annual assessments of the performance of the PCU and will submit the results for the Bank's review and no-objection.

4.1.3 To facilitate harmonious and effective execution/implementation of the project, GHA shall ensure when necessary the attendance of site meetings by the concerned agencies and their decentralized representatives.

4.1.4 Supervision of the road and ancillary works will be strengthened by the commissioning of 1 external consulting engineering firm. In addition, GHA will designate two Counterpart Resident Engineers (CRE) (one for each of the 2 lots) to be stationed at site.

Procurement arrangements

4.1.5 The procurement of goods, works and acquisition of consulting services financed by the Bank shall be done in accordance with the Bank's "Rules and Procedures for Procurement of Goods and Works" or, as appropriate, "Rules and Procedures for the Use of Consultants", using the relevant Bank Standard Bidding Documents (SBD).

4.1.6 The procurement of the Ffulso–Salwa road works will be undertaken in 2 lots: i) Ffulso-Larabanga (80 km) and ii) Larabanga-Sawla (67.5 km). In order to expedite project implementation and to minimize the procurement delays, the Bank gave its no-objection to GOG's request to undertake Advanced Contracting for the Ffulso-Sawla road project. The bidding process has already started and it is expected that the procurement of the works contractors would be completed early 2011.

Financial management

4.1.7 The Finance Division, (under the Administration Department) of GHA will be responsible for the financial management and reporting procedures for the project. An accountant has been assigned to the PCU whose members will be responsible for processing of contractors/consultants certificates for payment. GHA has financial management procedures manual (currently being revised) that describes the accounting system, internal control procedures, accounting basis and standards to be applied, as a guide for implementation of activities under the project to ensure proper accountability.

4.1.8 An assessment of the financial management arrangement at GHA concludes that there are systems in place that satisfy the Bank's minimum requirements under *Guidelines for Financial Management and Financial Analysis of Projects (November 2000)*, and overall financial management arrangement is rated as **moderate**.

Disbursement and audit

4.1.9 The Direct Payment Disbursement Method will be used for the Works, Goods and Consultancy Services financed by the ADF grant. GOG shall open an account to lodge the counterpart funds which consist of the resettlement compensation and PCU operating costs. It was agreed that GOG will open the account and deposit the funds necessary (GHS 400,000) to cover the required amount for the first year operation of the PCU as well as the compensation and resettlement for all Project Affected People (PAP). Overall, the project will be subject to annual technical and financial audits.

4.2. Monitoring

4.2.1 Monitoring and Evaluation (M&E) will comprise both internal and external systems and processes. An M&E mechanism which will be operational from the commencement of the project to its completion will monitor the log frame indicators. This mechanism will serve to: (i) refine project indicators and define a baseline situation for project impact monitoring requirements; (ii) compile and manage information on the level of implementation of the different project components through a relational database, and; (iii) carry out mid-term and post-completion project impact assessments using the same methodology as was used in establishing the baseline situation. This M&E service will be provided by a competitively selected external consultant financed by the Bank under the project.

4.2.2 The Ghana Highway Authority (GHA) shall regularly provide the Bank with quarterly progress reports for the project including monitoring of environmental and social impacts as well as updates on the status of implementation of the ESMP and the ARAP. The supervising consultant will ensure full compliance with ESMP and ARAP mitigation measures and in conjunction with GHA, provide as part of the quarterly progress reports, project implementation updates encompassing physical and financial progress of the project.

4.2.3 The Proposed project also includes quarterly technical audits. The objective of these technical audits is to provide a factual report on the quality of works and services carried out by the contractor and the supervising consultant, with regard to the organisational, technical, contractual and financial aspects, of the road and ancillary works. The technical auditor will therefore provide regular feedbacks to remedy errors that could have occurred, or which can lead to improvements in implementation and results of the project.

4.2.4 Further monitoring will be done at the national, regional, district, and community levels and involve respective authorities. The project also integrates a continuous consultative process premised on systematic consultations with stakeholders through site meetings, district assemblies and project impacts results workshops. Local authorities, NGOs, CBOs, and other organizations representing marginalized groups' interests will assume a critical role in this process. Internally, monitoring of the project will be done through the Bank's semi-annual supervision missions in accordance with the Bank Group's Operations Manual. Additionally, the Bank will undertake a mid-term review during the second year of implementation in 2013 to identify any major constraints facing the project and provide the required corrective measures.

4.3. Governance

4.3.1 Ghana has made tremendous strides in Good Governance, transparency and accountability over the years. One of the three strategic pillars of the GPRS II (2006-2009) related to encouraging good governance and civic responsibility by empowering state and non-state entities

to participate in the development process and collaborate in promoting peace and political stability as well as accountability, transparency and the rule of law.

4.3.2 As part of the Bank's continued support to Ghana's governance, a UA 90 million loan was approved in 2008 (with disbursement in three tranches, each of UA 30 million, in 2008, 2009 and 2010) under the country's ADF XI allocation for the Third Poverty Reduction Budget Support (PRSL III) programme. The programme is expected to improve governance in relation to public financial management, energy reforms, and private sector development as well as gender mainstream.

4.3.3 Recent public financial management reforms in the country culminated in the formation of Ghana Revenue Authority (GRA) and the introduction of the Ghana Integrated Financial Management Information System (GIFMIS) in mid-2009. GRA is being supported by GTZ and the GIFMIS is supported by the World Bank, EU and DFID. Development partners are also discussing the setting up of a pooled fund for the support of other key PFM reforms that would need to be implemented alongside the GRA and GIFMIS.

4.3.4 In the roads sub-sector, GOG commissioned a range of institutional studies whose recommendations with regards to governance included: a) the creation of the National Roads Authority (NRA) , with responsibility for the management and funding of road assets through decentralized agencies including the Road Fund; b) the immediate adoption of a more transparent and structured approach to budget approval, primarily to support the existing Road Fund in satisfying its legal duty to ensure that road maintenance programs of the agencies (GHA, DUR, and Department of Feeder Roads) are approved within the budget limits and in accordance with the priorities set out by the Road Fund Act (funding routine and periodic maintenance). Challenges such as unplanned expansion of the road network, inadequacy of revenue generation to cover maintenance costs, over-commitment of road projects in excess of the approved budget, and inconsistent prioritization of maintenance investments, remain but are being tackled through dialogue with GOG in the framework of the Transport Sector Group. Additionally, the transport sector reforms policy targets which are being included within the MDDBS Performance Assessment Framework are expected to further improve the road sector governance.

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.

4.4.2 With regards to road usage and the resulting loading and its effect on the pavement and the control thereof, Ghana already has legislation on axle load control with 9 out of 14 constructed weighbridges currently in operation with a further 9 additional weighbridge stations currently being planned including 1 at Wa approximately 95km north of Sawla. One of the operational weighbridges is located at Yapei 28km north of Ffulso on the Kintampo – Tamale Road which runs north-south perpendicular to the proposed project road. Given the anticipated level of diverted/generated traffic including goods vehicles, 2 new weighbridge stations are proposed under the project for axle load control against excessive loading which could lead to the premature deterioration of the road pavement.

4.4.3 GHA has the responsibility of maintaining all trunk roads in Ghana and will thus have the same responsibility for the Ffulso – Sawla 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 has increased annually from US\$ 84.5 million in 2004 to US\$ 115

million in 2008 and is projected to reach US\$ 120 million in 2010 with the increase in road and bridge toll rates, road user fees and vehicle registration fees. In the recent past, the Road Fund revenues have not been sufficient to cover the whole annual road maintenance requirement largely because the fuel levy (which constitutes about 85% of the Fund's revenue) together with other road user fees and tolls were not adjusted in line with inflation and other factors as well as the utilization/over commitment of the fund's resources to projects i.e. major rehabilitation works which are beyond the scope of the fund's establishment. The RF releases to GHA for trunk roads routine and periodic maintenance which has significantly increased from US\$ 37 million in 2006 to US\$ 56 million in 2008, is expected to rise over time as the network expands. With the increase in Road Fund's sources of revenue it is expected that the fund will be able to meet the future maintenance requirements of the proposed project and country's trunk roads. GHA has the requisite expertise and experience in managing trunk road assets including their maintenance and to that end has a maintenance department charged with that responsibility.

4.4.4 The sustainability of the proposed investment in socioeconomic infrastructure (construction and/or rehabilitation) will be guaranteed by a multiplicity of factors. Through a user fee model/system, a portion of which is set aside/used to cover operational and maintenance costs, the Metropolitan/Municipal/District Assemblies (MMDAs) who are responsible in Ghana for the operation and maintenance of socioeconomic infrastructure such as lorry parks, terminals, markets and public toilets will ensure the sustainability of the interventions proposed under the project. For the educational and health facilities proposed under the project, the District Assemblies are responsible and part of the District Assembly Common fund and revenues budget shall be used towards maintenance. Facilities often have user fees built into their billing schemes, part of which is used directly by the management of the facility to undertake some of the maintenance works. The sustainability of socioeconomic infrastructure is already assured with regards to the personnel required to man/operate them as staff are already in place but the absence of the requisite infrastructure is restricting their service delivery effort. The available staff will play a critical role in maintaining the basic equipment particularly those provided for health care (CHPS & Accident Centre) under the project. The Government's commitment to operating and sustaining the socioeconomic infrastructure provided is further complemented through its national development strategies, sector policies and legislation.

4.4.5 Overall, project interventions will also be sustained by the active participation of community members in the PA. The project incorporates a continuous consultative process, which will target key stakeholders throughout all phases of the project. This process will build and instill ownership within the concerned communities and provide mechanisms through which the perspectives and interests of stakeholders can be considered and incorporated beyond the design phase. Local authorities, NGOs, CBOs and other organizations representing marginalized groups' interests will assume a vital role in leveraging community participation, further cultivating ownership as well as accountability, all of which are the core of sustainability. These specific stakeholders will leverage participation through their active involvement and integration in the project's continuous consultation process.

4.5. Risk management

4.5.1 The successful implementation of the project and achievement of its development objectives is predicated on several assumptions, each of which may constitute a potential risk. These risks and the mitigation measures incorporated in the project design are as follows:

- i) *Government Counterpart Funds*: GOG counterpart funds have been minimized to include only compensation and resettlement costs as well as PCU related costs. However, counterpart funds remain critical and should its availability on a regular basis become unattainable, the project will experience delays in its implementation. In order to secure the Government's counterpart funding to the project, GOG has been required

prior to the Negotiations, to open a counterpart account and deposit the resettlement compensation and one year of PCU operating costs (this was done at the time of Negotiations). Annual replenishments of the counterpart funds have been included as “other” grant condition of the project.

- ii) *GOG allocates sufficient funds for routine and periodic maintenance of the completed road.* GOG maintenance expenditures for trunk roads have significantly increased over the years, with Road Fund releases to GHA augmenting from US\$ 37 million in 2006 to US\$ 56 million in 2008. With the February 2010 increase in road and bridge toll rates as well as road and vehicle user fees, Road Fund revenue is expected to increase from US\$ 117 million in 2009 to US\$ 120 million in 2010. These gains have allowed GOG to clear in early 2010 road arrears (GHS 160 million) owed to contractors. The increase in Road Fund revenues will also help clear maintenance backlog and stabilize the condition of the network. Overall, it is expected that these additional financial resources will help meet Ghana’s road maintenance requirements.
- iii) *GOG allocate adequate human and financial resources to sustain the socio-economic infrastructure.* The sustainability of the socioeconomic infrastructure that is constructed and/or rehabilitated will be guaranteed by multiple factors. In Ghana, lorry parks, markets, and boreholes are operated and successfully maintained by the District Assemblies through the collection of user fees. Through the user fee model, a portion of the fees is used to cover operational and maintenance costs for the facilities. Education and health facilities, though not operated by the Assemblies, are maintained using part of the Assembly’s budgets/revenues. These facilities often have user fees built into their billing schemes, part of which is used directly by the management to undertake maintenance works. The sustainability of socioeconomic infrastructure is already assured with respect to personnel, as staff is already in place and this will play a critical role in maintaining the basic equipment provided under the project. GOG’s commitment in operating and sustaining the provided socio-economic infrastructure is further complemented through its national development strategies, sector policies, and legislation.
- iv) *No Delays in commencement and progress of works:* Another risk could involve a delay in starting the works, which could potentially lead to cost overruns. Under the proposed project, these delays are not likely to occur since there are very few grant conditions and GOG has officially validated the road design. In addition, the establishment of a dedicated PCU will further help to minimize delays during implementation. Additionally, the Bank has granted a ‘no objection’ to a recent request from GOG to undertake APA for the project. This will significantly minimize procurement delays following grant approval as procurement will run concurrently with the Bank’s internal review processes to the Board’s consideration stage. Procurement process has already started and it is anticipated that the road and ancillary works would commence early 2011. The dedicated PCU will ensure the effective management and implementation of the projects.
- v) *Land acquisition and compensation issues completed:* Preliminary identification of PAP and assessment of the type of goods affected has been undertaken. Currently, the compensation and resettlement costs for all PAP are estimated at GHS 100,350. Compensation and resettlement costs for all PAP must be paid by GOG prior to commencement of works, and this will be one of the grant conditions precedent to first disbursement, if proof of payments has not provided at the Negotiations. In addition, the transfer of ownership to GOG of the sites for the markets and lorry parks at Larabanga, Busunu, Ffulso, Sawla and Damongo prior to the commencement of

construction of these facilities will be a prerequisite to the Bank's interventions on those sites. Documentary evidence of GOG's ownership of these sites will be under "other" grant conditions.

- vi) *Price escalation*: Another possible risk could be the price escalation during implementation, which could be higher than anticipated at appraisal. This risk is mitigated against by the fact that the cost estimates were prepared taking into account Ghana's inflation and construction market conditions with inclusion of adequate physical and price contingencies in the project costs.
- vii) *Axle load control*: As the Ffulso-Sawla links Ghana's two gateways to Burkina Faso, the upgrading of this road will facilitate trade between Ghana and its northern landlocked neighbours, Burkina Faso, Mali and even Niger. A significant movement of freight is therefore anticipated on the road. In order to limit overloading which will rapidly deteriorate the road, the project includes the construction of 2 permanent weighbridges stations along the Ffulso-Sawla road corridor for axle load control and enforcement of limits.

4.6. Knowledge building

4.6.1 There are four main knowledge enhancement activities stemming from this project. First, the project includes urban roads studies to prepare for ADF XII lending for Ghana. Secondly, the construction of the permanent weighbridges will allow the collection of data to determine trends of overloading. The data collected will also help determine whether the existence of weighstations raises awareness on the danger of overloading. Thirdly, the infrastructure in support of tourism which mainly consists of signage in the vicinity of the Ffulso-Sawla road will direct and inform people of the key touristic attractions in the region. Furthermore, this signage will also be a key communication tool to inform the public about Bank's interventions in Ghana's development. The construction of a small conservation museum at Mole Park, as part of the project environmental mitigation measures, will promote knowledge vital to the conservation of animals in this largest game park in West Africa. The conservation museum will showcase a permanent indoor exhibit to advance knowledge, awareness on major environmental issues. Lastly, the component on the monitoring and evaluation of the project's impacts will involve the assessment of the extent of achievement of the project objectives at various stages during implementation. The M&E mechanism will start with a baseline survey that will refine the indicators before the project and then track the same indicators throughout project implementation. Information on the level of implementation of the project components will be managed through a relational database. The use of the database will effectively facilitate the management of information with regards to outputs, outcomes and lessons learned.

V – LEGAL INSTRUMENTS AND AUTHORITY

5.1. Legal instrument

To finance this project, the Bank will use a grant from the ADF XI Ghana national resource allocation.

5.2. Conditions associated with Bank's intervention

A. Conditions Precedent to Entry into Force of the Grant

The entry into force of this Grant Protocol of Agreement shall be subject to the fulfillment by the Borrower of the provisions of Section 12.01 of the General Conditions.

B. Condition Precedent to the First Disbursement of the Grant

The obligations of the Fund to make the first disbursement of the Grant shall be conditional upon entry into force of the Grant Protocol of Agreement and the fulfillment by the Borrower, of the following condition:

- (i) Submit documentary evidence acceptable to the Fund that the land and other properties acquired by GOG for the purpose of implementing the road project have been fully paid and any person displaced as a result of the project has been fully compensated in accordance with the agreed Abbreviated Resettlement Action Plan (para 4.5.1v).

C. Other Conditions of the Grant

The Borrower shall:

- (i) Submit documentary evidence acceptable to the Fund of the Government's ownership of the sites marked for the construction of markets and lorry parks at Fufulso, Busunu, Damongo, Larabanga, and Sawla prior to the commencement of these works (para 4.5.1v);
- (ii) Deposit by June of each fiscal year in the counterpart account, GOG's yearly contribution to the project (para 4.5.1i).

5.3. Compliance with Bank Policies

- (X) This project complies with all applicable Bank policies.

VI – RECOMMENDATION

Management recommends that the Board of Directors approve the proposed ADF grant of UA 109.72 million to the Government of Ghana subject to the conditions stipulated in this report for the purpose of the Fufulso – Sawla Road Project.

Appendix I. Ghana's comparative socio-economic indicators

Indicator	Year	Ghana	Africa	Developing Countries	Developed Countries	Charts
Basic Indicators						<p>GNI per Capita (US \$)</p>
Area ('000 Km ²)	2007	238.53	30,322.57	80,975.97	54,658.39	
Total Population (millions)	2009	23.84	1,008.35	5,628.53	1,068.73	
Urban Population (% of Total)	2009	50.74	0.00	44.76	77.66	
Population Density (per Km ²)	2009	99.93		66.60	23.10	
GNI per Capita (US \$)	2008	670.00	1,427.92	2,780.29	39,688.06	
Labor Force Participation - Total (%)	2009	10.82	396.20	0.00	0.00	
Labor Force Participation - Female (%)	2009	49.03	41.24	39.80	43.32	
Gender -Related Development Index Value	2005	0.55	0.49		0.91	
Human Develop. Index (Rank among 182 countries)	2007	152.00				
Popul. Living Below \$ 1 a Day (% of Population)	2006	29.99		25.00		
Demographic Indicators						<p>Population Growth Rate - Total (%)</p>
Population Growth Rate - Total (%)	2009		2.29	1.37	0.71	
Population Growth Rate - Urban (%)						
Population < 15 years (%)	2009	38.42		29.23	17.67	
Population >= 65 years (%)	2009	3.63	3.42	5.99	15.30	
Dependency Ratio (%)	2009	72.54	82.30	52.80		
Sex Ratio (per 100 female)	2009	102.76		934.93	948.33	
Female Population 15-49 years (% of total population)	2006		0.00	53.30	47.20	
Life Expectancy at Birth - Total (years)	2009	56.83	55.67	65.68	79.81	
Life Expectancy at Birth - Female (years)	2009	57.74	54.43	68.87	82.68	
Crude Birth Rate (per 1,000)	2009	32.07	35.41	21.48	12.03	
Crude Death Rate (per 1,000)	2009	11.01	12.20	8.21	8.30	
Infant Mortality Rate (per 1,000)	2009	71.96	79.36	53.09	5.75	
Child Mortality Rate (per 1,000)	2009	115.17	129.81	51.38	6.30	
Total Fertility Rate (per woman)	2009	4.22	4.51	2.67	1.77	
Maternal Mortality Rate (per 100,000)	2005	560.00	691.15	440.00	10.00	
Women Using Contraception (%)	2003	25.00		61.00	75.00	
Health & Nutrition Indicators						<p>Access to Safe Water (% of Population)</p>
Physicians (per 100,000 people)	2004	14.69	42.95	77.00	287.00	
Nurses (per 100,000 people)*	2004	89.35	116.59	98.00	782.00	
Births attended by Trained Health Personnel (%)	2008	58.70		39.00	99.32	
Access to Safe Water (% of Population)	2006	80.00	63.92	83.99	99.58	
Access to Health Services (% of Population)	2000	76.00	65.32	80.00	100.00	
Access to Sanitation (% of Population)	2006	10.00	38.44	54.60	99.85	
Percent. of Adults (aged 15-49) Living with HIV/AIDS	2007	1.90	4.56	161.86	14.14	
Incidence of Tuberculosis (per 100,000)	2007	203.00	313.75			
Child Immunization Against Tuberculosis (%)	2007	99.00	83.08	89.00	99.00	
Child Immunization Against Measles (%)	2007	95.00	83.08	76.00	92.62	
Underweight Children (% of children under 5 years)	2006	18.00	31.08	27.00	0.10	
Daily Calorie Supply per Capita	2005	2,758.93	2,413.39	2,675.20	3,284.70	
Public Expenditure on Health (as % of GDP)	2006	1.74		4.00	6.87	
Education Indicators						<p>Secondary School - Total</p>
Gross Enrolment Ratio (%)						
Primary School - Total	2008	101.85	96.86	106.00	101.50	
Primary School - Female	2008	101.33	92.22	104.58	101.21	
Secondary School - Total	2008	54.10	38.14	62.32	100.28	
Secondary School - Female	2008	50.86	33.38	60.71	100.00	
Primary School Female Teaching Staff (% of Total)	2008	33.03				
Adult Illiteracy Rate - Total (%)	2007	34.97		19.03		
Adult Illiteracy Rate - Male (%)	2007	28.31	14.69	13.39		
Adult Illiteracy Rate - Female (%)	2007	41.74		24.45		
Percentage of GDP Spent on Education	2005	5.44			5.42	
Environmental Indicators						
Land Use (Arable Land as % of Total Land Area)	2007	18.02	7.46	9.86	11.60	
Annual Rate of Deforestation (%)	2000	1.72	0.60	0.40	-0.20	
Annual Rate of Reforestation (%)						
Per Capita CO2 Emissions (metric tons)	2008	0.32		1.90	12.30	

Sources : ADB Statistics Department Databases; World Bank: World Development Indicators
UNAIDS; UNSD; WHO; UNICEF, WRI, UNDP; Country Reports.

Last update: August 2010

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

Appendix II. Table of ADB's portfolio in the country

List of active projects (loans and grants) by Sector:

Sector	Project	Status	Loan Number	Approval	Signature	Entry into Force	First disb	Latest Dis	Netloan	Disb.Ratio	Planned Project
Agriculture	INLAND VALLEY RICE DEVELOPMENT PROJECT	OnGo	2100150000344	05/18/2001	05/23/2001	06/06/2002	03/10/2004	10/14/2010	15,000,000.00	48.85	06/30/2011
Agriculture	INLAND VALLEY RICE DEVELOPMENT PROJECT	OnGo	2150150000858	05/18/2001	05/23/2001			12/31/2004	197,576.92	100.00	
Agriculture	LIVESTOCK DEVELOPMENT PROJECT	OnGo	2100150006676	10/10/2001	08/02/2002	12/05/2002	06/03/2003	10/13/2010	19,580,000.00	70.58	12/31/2010
Agriculture	LIVESTOCK DEVELOPMENT PROJECT	OnGo	2150150000884	10/10/2001	08/02/2002			12/31/2004	1,062,896.70	100.00	
Agriculture	COMMUNITY FORESTRY MANAGEMENT PROJECT	OnGo	2100150006926	07/03/2002	04/16/2003	10/13/2003	12/04/2003	10/12/2010	7,000,000.00	98.13	12/30/2010
Agriculture	COMMUNITY FORESTRY MANAGEMENT PROJECT	OnGo	2150150000886	07/03/2002	04/16/2003			12/31/2004	735,671.38	100.00	
Agriculture	RURAL ENTERPRISES PROJECT	OnGo	2100150007015	12/12/2002	04/16/2003	09/30/2003	01/28/2004	09/17/2010	7,500,000.00	54.29	12/31/2011
Agriculture	RURAL ENTERPRISES PROJECT	OnGo	2150150000888	12/12/2002	04/16/2003			12/31/2004	91,615.86	100.00	
Agriculture	NERICA DISSEMINATION PROJECT - GHANA	OnGo	2100150007161	09/26/2003	10/07/2003	02/05/2005	03/30/2005	09/17/2010	2,650,000.00	87.61	12/31/2010
Agriculture	GHANA - CREATION OF SUSTAINABLE TSETSE A	OnGo	2100150009194	12/08/2004	04/15/2005	12/28/2005	01/23/2006	08/20/2010	6,640,000.00	85.62	12/31/2011
Agriculture	EXPORT MARKET AND QUALITY AWARENESS PROG	OnGo	2100150010245	07/13/2005	07/29/2005	03/24/2006	05/31/2006	10/13/2010	17,000,000.00	26.77	12/31/2011
Agriculture	AFRAM PLAINS RURAL DEVELOPMENT PROJECT	OnGo	2100150012345	05/31/2006	06/29/2006	02/02/2007	02/02/2007	08/03/2010	19,970,000.00	44.90	12/31/2012
Agriculture	NORTHER RURAL GROWTH PROGRAM	OnGo	2100150015795	12/17/2007	03/04/2008	09/08/2008	04/30/2009	09/10/2010	40,000,000.00	2.11	12/31/2015
Agriculture	COCOBOD	OnGo	2000120002520	09/16/2009	09/25/2009	10/06/2009	10/06/2009	11/23/2009	22,354,646.89	100.00	03/31/2010
Finance	LINE OF CREDIT TO CAL BANK	OnGo	2000120001772	07/24/2008	11/17/2008	12/03/2008	12/03/2008	02/13/2009	9,580,562.95	100.00	11/17/2009
Ind/Mini/Quar	KEMPINSKI HOTEL PROJECT	APVD	2000130006231	09/27/2010					0.00	0.00	
Multi-Sector	POVERTY REDUCTION SUPPORT LOAN PRSL III	OnGo	2100150017393	09/17/2008	10/28/2008	12/11/2008	12/11/2008	01/29/2010	90,000,000.00	88.89	12/31/2011
Power	Power System Reinforcement Project	OnGo	2100150015548	11/28/2007	03/04/2008	11/20/2008	06/10/2010	09/01/2010	27,600,000.00	8.25	12/31/2011
Power	TEMA OSONOR POWER PLANT	APVD	2000120001919	10/15/2008					0.00	0.00	
Power	TEMA OSONOR POWER PLANT LIMITED	APVD	2000120002319	10/15/2008					0.00	0.00	
Social	HEALTH SERVICES REHABILITATION III	OnGo	2100150006975	10/30/2002	06/04/2003	03/30/2004	03/30/2004	08/06/2010	17,640,000.00	29.34	12/24/2010
Social	HEALTH SERVICES REHABILITATION III	OnGo	2100155001868	10/30/2002	06/04/2003	09/09/2003	03/30/2004	12/28/2007	1,000,000.00	60.39	12/24/2010
Social	SENIOR SEC. SCHOOL SUPPORT PROJECT - III	OnGo	2100150007215	09/24/2003	04/01/2004	09/03/2004	11/12/2004	10/14/2010	20,000,000.00	52.79	12/31/2010
Social	SENIOR SEC. SCHOOL SUPPORT PROJECT - III	OnGo	2100155002033	09/24/2003	04/01/2004	09/03/2004	11/12/2004	05/06/2010	5,000,000.00	31.43	12/31/2010
Social	SENIOR SEC. SCHOOL SUPPORT PROJECT - III	OnGo	2150150000892	09/24/2003	04/01/2004			12/31/2004	62,914.65	100.00	
Social	Urban Poverty Reduction Project	OnGo	2100150010893	10/12/2005	11/23/2005	03/21/2006	04/27/2006	10/13/2010	25,000,000.00	46.52	12/30/2011
Social	GENDER RESPONSIVE SKILLS & COM. DEV PROJ	OnGo	2100150015898	12/19/2007	05/14/2008	01/15/2009	01/15/2009	04/09/2010	5,950,000.00	4.57	12/31/2012
Social	GENDER RESPONSIVE SKILLS & COM. DEV PROJ	OnGo	2100155010919	12/19/2007	05/14/2008	01/15/2009	01/15/2009		2,360,000.00	0.00	12/31/2012
Transport	TEMA-AFLAO ROAD REHABILITATION PROJECT	OnGo	2100150006848	04/17/2002	08/02/2002	12/05/2002	09/14/2005	09/17/2010	14,700,000.00	38.38	06/30/2012
Transport	AKATSI-DZODZE-NOEPE ROAD(AKATSI-AKANU)	OnGo	2100150007013	12/20/2002	07/18/2003	07/23/2004	09/14/2005	10/12/2010	12,720,000.00	42.02	06/30/2012
Transport	ROAD INFRASTRUCTURE PROJECT 2003	OnGo	2100150007118	09/17/2003	04/01/2004	09/24/2004	12/22/2004	10/13/2010	18,000,000.00	38.11	06/30/2012
Transport	ROAD INFRASTRUCTURE PROJECT 2003	OnGo	2100155001967	09/17/2003	04/01/2004	04/01/2004	12/22/2004	09/24/2009	573,519.97	100.00	06/30/2009
Transport	ROAD INFRASTRUCTURE PROJECT 2003	OnGo	2200160000136	09/17/2003	04/01/2004	09/24/2004	12/22/2004	10/14/2010	3,000,000.00	33.66	06/30/2012
Transport	UEMOA/Ghana-Programme Routier 1	OnGo	2100150007165	11/19/2003	12/18/2003	10/12/2004	11/14/2005	10/13/2010	64,500,000.00	30.99	12/31/2012
Transport	Supplementary Loan for Lot 2 of Tema Af	OnGo	2100150019194	12/16/2008	06/10/2009	11/10/2009	11/10/2009	05/06/2010	25,400,000.00	6.74	12/31/2012
Transport	Supplementary Loan for Lot 2 of Akatsi A	OnGo	2100150018994	12/16/2008	06/10/2009	11/10/2009	11/10/2009	08/03/2010	13,400,000.00	10.57	12/31/2011
Transport	Supplementary Loan for Lot 2 Apaaso Kint	OnGo	2100150019043	12/16/2008	06/10/2009	11/10/2009	11/10/2009		4,300,000.00	0.00	12/31/2011
Transport	AWOSHIE POKUASE ROAD & COMMUNITY DEV	APVD	2100150020893	10/14/2009	04/01/2010	07/01/2010			53,590,000.00	0.00	12/31/2015
Water Sup/Sanit	Rural Water and Sanitation Programme	OnGo	2100155003119	09/08/2004	10/13/2004	05/12/2005	09/23/2005	09/23/2010	12,800,000.00	45.67	06/20/2011
Water Sup/Sanit	ACCRA SEWERAGE IMPROVEMENT PROJECT (ASIP)	OnGo	2100150011894	04/26/2006	05/19/2006	06/23/2007	09/06/2007	10/12/2010	46,000,000.00	6.31	12/31/2011
Water Sup/Sanit	IMPROVED SANITATION AND WATER SUPPLY SER	OnGo	5600155001651	09/18/2009	01/15/2010	01/15/2010	05/06/2010	07/27/2010	1,748,480.35	30.00	01/15/2012
Water Sup/Sanit	DESIGN FOR RE-USE	APVD	5600155002451	07/28/2010					0.00	0.00	
Water Sup/Sanit	REOPTIMIZATION STUDY OF AKOSOMBO & KP DAM	APVD	5600155002501	08/02/2010					0.00	0.00	

Key related projects financed by the Bank and other development partners in the country

AfDB	UA million	Approval Date
Tema-Aflao Rehabilitation Project	14.70	2002
Akasti-Dzodze-Noepe Road (Akatsi-Akanu)	12.72	2002
UEMOA/ Ghana Road Programme 1	24.49	2003
Road Infrastructure Project	18.80	2003
Supplementary Loans for: Tema-Aflao Road Rehabilitation Project	25.40	2008
Akatsi-Dzodze- Noepe Trunk Project	13.40	
UEMOA/ Ghana Road Programme 1	4.30	
Awoshie-Pokuase Road and Community Development Project	53.59	2009
EC	US\$ million	
Eastern Corridor Road Project	22.81	2008
Transport Sector Planning And Integration Programme	5.00	2006
Rehabilitation of Kumasi Techiman – Lot 2 (75 Km)	35.90	2004
Feeder Roads Improvement Project (Frip)	27.00	2004
EDF 10 Road Project	76.00	2009
WB	US\$ million	
Urban Transport	45.00	2007
Urban Transport (GEF)	7.00	2007
WA Transit & Trade Facilitation	85.00	2008
Transport SWAP	115.00	2009
WA Lagos-Abidjan regional corridor	75.00	2009
WA Air Safety	15.00	2009
WA Transit/Trade Facilitation (ph 2)	105.00	2010
AFD	Euro million	
Kumasi Bypass	23	2005
Urban Transport	20	2008
Rehabilitation of feeder roads and construction of rural bridges in the north, road sector development program	10.9	2001
Awoshie-Pokuase Road and Urban Development Project	30	2009
Urban Environment & Sanitation Project (UESP 2)	25	2006
KfW	Euro million	
Sogakope – Akatsi Road	20	2001
Feeder Roads Program	7.2	2006

DANIDA	US\$ million	
Transport Sector Program Phase II	180	2003
Takoradi – Agona Road	26	2009
JICA	US\$ million	
National Road No 8	8	2008
Millennium Development Authority	US\$ million	
Transport Infrastructure Development	121.84	2006

Donor coordination in the transport sector

In the transport sector, Ghana has a quite effective donor coordination mechanism which is of threefold:

A. Broader Country Context

A Multi-Donor Budget Support (MDBS) Framework was signed in March 2003 between GOG and DPs. Furthermore, the Ghana Joint Assistance Strategy (G-JAS) 2007-2010, which involves the majority of Ghana's DPs with about 95% of ODA flows, is the common strategic framework for enhanced donor harmonization and coordination as well as alignment of their development assistance with Ghana's GPRS II.

B. Transport Sector Group

For the transport sector, dialogue with the Government primarily takes place within the framework of the monthly meetings of the Transport Sector Group, which is chaired by the MRH with the European Commission acting as Lead DP and Denmark as the Co-lead. Other major DPs in the sector include the AfDB, DFID, DANIDA, AFD, KfW, MCC, JICA and WB.

Dialogue, which was previously centered around roads and based on the Road Sector Development Program, has during recent years been expanded upon to include transport services and all modes of transport, such as roads, air, rail and water (inland and maritime). DP interventions now stem from components of the "Transport Sector Development Programme (TSDP)" (2008- 2013) estimated at US\$ 3.9 billion, of which US\$ 2.9 billion is allocated to the Roads sub-sector. For the road sub-sector, the Government has secured funding for US\$ 1.6 billion for the TSDP and is looking at options to close the funding gap (US\$ 1.2 billion). A 'programmatic approach' for the systematic achievement of the TSDP objectives was adopted and negotiations have started with Development Partners to secure funding for components of the programme. Whilst the TSDP is in place, there is still a need for a range of decision making tools to support Ghana's economic and transport planners to formulate more effective investment plans and strategies for the sector. This is being achieved through the Integrated Transport Plan (ITP) study, which is currently being funded

by the EU. The ITP aims at enriching GOG and DP decision-making capabilities through transport demand forecasting. It is expected that the ITP will replace the TSDP.

Issues related to transport sector policies and financing of the TSDP are regularly discussed within the Transport Sector Group and are formally reviewed during the annual Transport Sector Development Partners' Conferences. A new format of Transport Sector Group meetings consisting of focused thematic discussions on key transport issues, such as axle load control and road financing, is being discussed.

C. AfDB – EC – WB Tripartite Partnerships

AfDB, EC and WB launched a tripartite cooperation process in June 2008 with Ghana being one of the countries identified to demonstrate the value addition that focused collaborations between the three institutions can bring to their client countries in three areas, one of them being infrastructure. Within the infrastructure area, the three institutions have retained the following three priority actions in the transport sector:

(i) Enhance Government/donor coordination at the country level to develop and strengthen SWAP implementation. – As described above, a functional sector group exists and benefits from the active participation of the three institutions.

(ii) Support regional integration – Missing links have been identified in the Abidjan to Lagos road corridor and in the Western, Central and Eastern corridors linking Ghana to its northern neighbours. Missing links have also been found in the Western and Eastern rail corridors.

(iii) Scale up resources on infrastructure funding – A Project Financial Analysis Unit has been set up at the Ministry of Finance and Economic Planning and is being strengthened with WB support. National workshops on PPPs were organized in November 2008. The EC is considering support to PPPs for railways.

Appendix IV. Map of the Project Area

GHANA HIGHWAY AUTHORITY
LOCATION MAP OF LINK NODE MARKERS

