# Strategic Environmental Assessment of the Transport Integration Plan of Ghana

## Service Contract No. 196110 (Ex 9 ACP GH 19)

## Scoping Report

**July 2009**

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## Issue and Revision Record

| Rev | Date | Originator | Checker | Approver | Description |
|---|---|---|---|---|---|
| A | 21/07/09 | AIW | LJH | WGC | First Draft |
| B | 24/07/09 | AIW | | | Final |

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**Chapters and Appendices**

## Acronyms and Abbreviations

| | |
|---|---|
| BOST | Bulk Oil Storage and Transport Company |
| DFR | Department of Feeder Roads |
| DUR | Department of Urban Roads |
| DVLA | Driver Vehicle Licensing Authority |
| EA | Environmental Assessment |
| EAA | Environmental Assessment and Audit |
| EC | European Commission |
| EU | European Union |
| ECOWAS | Economic Commission of West African States |
| EIA | Environmental Impact Assessment |
| EPA | Environmental Protection Agency |
| EPC | Environmental Protection Council |
| ESMF | Environmental and Social Management Framework |
| EU | European Union |
| FSD | Forest Services Division |
| GACL | Ghana Airports Company Ltd |
| GCAA | Ghana Civil Aviation Authority |
| GEA | Ghana Employers Association |
| GHA | Ghana Highways Authority |
| GLSS | Ghana Living Standards Survey |
| GMA | Ghana Maritime Authority |
| GOG | Government of Ghana |
| GPHA | Ghana Ports and Harbours Authority |
| GPRS | Ghana Poverty Reduction Strategy |
| GPRS II | Growth and Poverty Reduction Strategy II |
| GPRTU | Ghana Private Transport Unions |
| GRC | Ghana Railway Company Ltd |
| GRDA | Ghana Railway Development Authority |
| GSS | Ghana Statistical Service |
| GTTC | Government Technical Training Centre |
| ICT | Information Communications Technology |
| IMT | Intermediate Modes of Transport |
| IRR | Internal Rate of Return |
| ITP | Integrated Transport Plan |
| MCEM | Multi Criteria Evaluation Manual |
| MDAs | Ministries, Departments and Agencies |
| MDG | Millennium Development Goals |

| | |
|---|---|
| MMT | Metro Mass Transit |
| MOFEP | Ministry of Finance and Economic Planning |
| MORH | Ministry of Roads and Highways |
| MOT | Ministry of Transport |
| MTTU | Motor Traffic and Transport Unit |
| NDPC | National Development Planning Commission |
| NAO | National Authorising Officer |
| NRSC | National Road Safety Commission |
| NEAP | National Environmental Action Plan |
| NEP | National Environment Policy |
| NEPAD | New Partnership for African Development |
| NMT | Non Motorised Transport |
| NOSCP | National Oil Spill Contingency Plan |
| NPV | Net Present Value |
| NTP | National Transport Policy |
| ODPM | Office of the Deputy Prime Minister, UK |
| OECD | Organisation for Economic Co-operation and Development |
| RPF | Resettlement Policy Framework |
| RSDP | Road Sector Development Programme |
| SCGA | Strategic Country Gender Assessment |
| SEA | Strategic Environmental Assessment |
| STC | State Transport Company |
| TIPG | Transport Integration Plan of Ghana |
| TOR | Terms of Reference |
| TSDP | Transport Sector Development Programme |
| TSPIP | Transport Sector Planning and Integration Programme |
| VLTC | Volta Lake Transport Company Ltd |
| VRA | Volta River Authority |
| WB | World Bank |
| WD | Wildlife Division |
| WRC | Water Resources Commission |

# Executive Summary

## Introduction

The Strategic Environmental Assessment (SEA) of the Transport Integration Plan is one of six components of the EU-financed Transport Sector Planning and Integration Project. The Contracting Authority is the Ministry of Finance and Economic Planning (MOFEP) and the Supervisor is the Ministry of Roads and Highways (MORH), in collaboration with the Ministry of Transport.

The SEA methodology follows the Ghana SEA approach at sector level, which involves the following steps:

Step 1: Preparation / Screening
Step 2: Scoping
Step 3: Assessment
Step 4: Monitoring and Evaluation
Step 5: Reporting

The preparatory or Inception Phase of the SEA study took place during February 2009, and the Inception Report was submitted in early March 2009. The Scoping Phase commenced in mid-May 2009. This report documents the Scoping Phase of the SEA.

## Scoping Workshop

A requirement of the Environmental Protection Agency's (EPA) scoping methodology is that a scoping workshop is conducted as part of the process to define the scope of the SEA. This was held on 30th June 2009, at the Forest Hotel in Dodowa, and 56 participants attended from various stakeholder categories. The purpose of the workshop was to facilitate broad stakeholder involvement in the development of the Integrated Transport Plan and associated processes, as well as to continue with the process of awareness raising and capacity building in the development of SEA in Ghana.

Specifically, the workshop objectives were to:

- Obtain participants' views and comments on the stakeholder analysis;
- Establish stakeholders prioritised expectations of the outputs and benefits of an integrated transport planning process;
- Establish factors and conditions required for the success of an integrated transport planning process and plan;
- Inform the stakeholders on the baseline integrated transport network and the demand scenarios to be used for modelling the Integrated Transport Plan (ITP);
- Identify stakeholders' perception of the main environmental sustainability (natural resources or bio-physical, socio-cultural, economic and institutional) issues of concern and desired aims with regard to the ITP. This forms the basis for the scope of the SEA study.

As part of the Inception Phase an initial analysis of stakeholders was carried out for engagement and consultation through all phases of the SEA study. Participants were categorised on the basis of their knowledge of transportation issues and their ability to influence the SEA process, and this then determined at what level and by what means they would be involved. The stakeholder analysis was then reviewed by participants at the Scoping Workshop held on 30th June 2009, and their additions and amendments sought so that a more comprehensive list of stakeholders is now available. This list will continue to grow as consultations and interactions with additional interested parties take place during the Analysis Phase of the study.

**Stakeholder Concerns**

In addition to the Scoping Workshop, issues raised at other forums were also noted, for example the Oil and Gas Conference for the Transport Sector held on 15th and 16th July 2009, and focus group discussions that were held with the Development Partners on 21st July 2009, and with gender interest groups on 22nd July 2009. The main issues raised bearing relevance to the development of an Integrated Transport Plan are presented in the box below.

The ITP planners will need to consider:

- In addition to roads, the provision of, and access to, transportation through other modes of transport, particularly rail and inland waterways, but also pipelines, maritime and aviation;
- The need for a multi-modal approach to deal with transport safety and security;
- The provision of transport solutions to enable adaptation to the effects of climate change;
- The need to strategically link rural and urban production areas so that untapped areas in the country can be opened up to development;
- The development of a transport network, rather than transport corridors.

**Environmental Sustainability Criteria**

One of the main objectives of the Scoping Workshop was to establish stakeholders' concerns or desired outputs from the ITP process, ie. environmental sustainability criteria. These were identified as follows:

- *Environmental considerations*: specifically impacts on air quality, loss of biodiversity and habitats, land degradation and water quality due to transportation projects;
- *Social / socio-cultural considerations*: Transportation safety, relocation and involuntary resettlement, accessibility by all to basic social and technical services through transportation, and public health concerns, especially implications on HIV/AIDS;

- *Economic considerations*: economic growth and stability, job creation and income generation through investment, poverty reduction;

- *Institutional considerations*: good governance, inter and cross-sectoral institutional collaboration and coordination roles and mandates.

**SEA Objectives**

While the overall objective of the SEA study is to mainstream environmental considerations into Transport Sector planning, specific objectives of the SEA of the ITP have been developed as part of this Scoping Phase.

In developing the objectives of the SEA, the following types of objectives have been distinguished:

- The objectives of the Integrated Transport Plan;

- External objectives, such as those that need to considered independently of the SEA process, for example national and international objectives for environmental sustainability;

- The objectives of the SEA, based on the identification of environmental sustainability concerns, and against which the environmental effects of the Integrated Transport Plan will be tested.

Stakeholder concerns and desired outputs provided the basis for developing the objectives, aspects and indicators of the SEA study. The prioritised objectives have enabled the identification of the relevant baseline that needs to be collected in the Analysis Phase, where that data can be obtained. Once the type and availability of data is established, the measurability and appropriateness of indicators will be assessed, and where applicable, the need for legal and regulatory changes will be determined, to ensure these objectives are met.

**Baseline Mapping**

Digitised maps have been prepared which show the existing major environmental factors in relation to road, rail, inland waterways and aviation infrastructure. Initial observations indicate that transport infrastructure is concentrated in the central and southern parts of Ghana. The transport network does not extend to the high potential areas in Eastern Region towards the Afram Plains, nor to the medium potential areas in the eastern / south-eastern parts of Northern Region.

The maps confirm that the transition zone from Brong Ahafo Region to the north and the eastern corridor towards the Afram Plains and beyond are inadequately served by transport, and this therefore limits economic growth. The maps also confirm the phenomenon of the population pull to the south and southwest because of the economic activities existing there, which has led to unsustainable urban growth and the propagation of poverty.

The ITP needs to therefore address the broad objectives of the GPRS II by strategically linking the rural and urban production centres, and providing access to areas with untapped potential.

**ITP Project Evaluation Criteria**

As part of the transport planning process, six factors – economic viability, environmental effects, social effects, strategic access, inter/intra-modal integration and local access – are to be applied for the selection of priority projects. In weighting, these criteria are not applied in all cases to each of the modes. Thus it is noted that:

- Local access has not been considered for railways;
- Strategic access, inter/intra modal integration and local access have not been considered for ports;
- Economic viability and inter/intra modal integration have not been considered for aviation;
- Inland waterways (which provide local access) and pipelines have not been included.

The reason for allocating different weights to different modes for the same criteria is also not clear.

**Compatibility Analysis**

Having established the SEA objectives, a compatibility matrix has been prepared where the project evaluation criteria in the manual developed by the ITP planners have been compared with the environmental sustainability criteria that were identified during the SEA Scoping Workshop. In this regard, some of the observations made are as follows:

- There is general concurrence between SEA environmental criteria and environmental evaluation criteria to be used for project evaluation;
- Air quality was identified as being the highest concern amongst the stakeholders, but this has not been included as an environmental evaluation criterion;
- Land degradation and biodiversity / habitat loss as sustainability criteria are embedded in the evaluation criteria related to Environmentally Sensitive Areas (ESAs), the Ecological Zones and to some extent the environmental impact potential;
- Noise should apply across all the transport modes;
- Transport/travel safety, relocation and involuntary resettlement are mutually compatible. However, travel safety should be included for all modes;
- The influence of transport/travel safety and public health on poverty reduction is not implied in the descriptions of the project evaluation criteria;
- Accessibility by all to basic social and technical services through transportation is not reflected as a social criterion, but it is included under more specific criteria for strategic and local access, which is a strong sustainability factor;
- Public health, especially the spread of HIV/AIDS, is one of the most important social issues related to all forms of transportation, and prioritised by stakeholders, but has not been referred to at all;

- Poverty reduction is the main rationale for evaluating social criteria. It also forms, together with job creation, part of the economic viability evaluation in the cost-benefit analysis;

- There is a pre-supposition that economic growth and stability influence favourable net present values (NPV) and internal rate of returns (IRR), and reaffirms the sustainability of the projects.

**Institutional Analysis**

Also during the Inception Phase, a review was conducted of the institutional, legal and regulatory framework for environmental management in Ghana. In the Scoping Phase, this has been refined with a view to providing a basis for assessing the capacity of key institutions responsible for environmental sustainability issues. Key institutions with the responsibility for monitoring the relevant natural/bio-physical and socio-cultural criteria were identified as being the EPA, the Forestry Commission, the Water Resources Commission and Transport Sector organisations. For the economic and institutional criteria, a multi-sectoral approach will be necessary, where a number of sector Ministries, Departments and Agencies (MDAs) will have to work together.

**SEA Activities**

In order to meet the SEA objectives, during the Analysis Phase, data requirements will be refined, appropriate and measurable indicators determined, and legal and regulatory established changes where necessary.

Stakeholder consultations will continue through the Analysis Phase, and will include regular interaction with the ITP planners.

During the Analysis Phase, the Draft Integrated Transport Plan will be subjected to four SEA tools, namely:

i. A compatibility analysis;

ii. An assessment of risks and opportunities presented by the Draft Integrated Transport Plan;

iii. A sustainability test to test the overall sustainability of the ITP;

iv. A compound matrix where the poverty dimensions of the ITP will be explored.

In the Environmental Strategy Phase, based on the findings from the Analysis Phase, the type and magnitude of the potential effects of the ITP will be predicted, and mitigation and enhancement measures recommended. This will include the elaboration of support measures required for strengthening institutional and governance capacity. Indicators developed in the Analysis Phase will provide the basis for developing an environmental monitoring plan, so that sustainability criteria can be effectively monitored.

**Revised SEA Work Programme**

The SEA work programme has had to be altered due to changes in the ITP process timelines. At this stage, it is anticipated that the SEA Analysis Phase will begin in September 2009, and that the Draft Integrated Transport Plan will be completed by mid December 2009, provided the ITP Consultant receives approval of the rider to the ITP study contract in early August. Assuming that there are no further delays to the development of the Draft Integrated Transport Plan, stakeholder workshops to present the Draft ITP will take place in early February 2010, and the SEA Analysis Report will be submitted at the end of February 2010. The Environmental Strategy Phase will follow the Analysis Phase, and the Draft SEA Report is expected to be presented by end March / early April 2010. After a review period of a month, the Final SEA Report is to be submitted at the end of May 2010.

**Observations and Lessons Learned**

During the course of the study, a number of general and study-specific observations were made and lessons learned. These are summarised in the box below.

SEA Approach

- In order to ensure that environmental sustainability issues identified through stakeholder consultation are included in the ITP objectives, the SEA study should have commenced in tandem with the ITP planning process.
- The need for extensive stakeholder consultation, the need to assimilate feedback from the SEA into the plan process, and the need for coordination between the SEA and the ITP processes should have been considered in the ITP and SEA study Terms of Reference, timelines and budgets.
- The basis and development of the tools and models to develop projects or scenarios should have been discussed with a wider group of stakeholders.
- No plan alternatives or scenarios will be generated, which poses a challenge for the SEA methodology, where plan scenarios are required to be evaluated.

Transport Model

- The model that has been developed appears to be biased towards road development because most of the available data is from the roads sector.
- The model prioritises projects based on project evaluation criteria that were not subjected to broad stakeholder consultation, and were not identified by transport sector stakeholders.
- There is a danger when long term investments in new infrastructure (such as rail) are compared with short term improvements (such as road upgrading or improvement).
- The need is for either a standard model that can be applied across all transport sectors using data derived from similar sources, or develop a model that can be used in the context of available data and responds to the requirements of the National Transport Policy.

Stakeholder Consultations

- Consultation budgets need to consider the flexibility requirements of any stakeholder consultation process, and allow for variations in the number and type of consultations.

# 1 Introduction

## 1.1 Background

The Transport Sector Planning and Integration Programme (TSPIP), financed under the 9th European Development Fund, aims to achieve equitable economic growth and accelerated poverty reduction within the context of a sustained democracy. The Programme is being undertaken by the Ministry of Finance and Economic Planning (the Contracting Authority), and is being supervised by the Ministry of Roads and Highways, in collaboration with the Ministry of Transport.

The purpose of the TSPIP is to provide a sound planning framework for the Transport Sector, informing the sector's service and investment priorities, meeting the needs stemming from economic development, regional integration and social cohesion, as defined in the national development agenda and at Economic Commission of West African States (ECOWAS) level.

The TSPIP has six components, viz:

- A Transport Sector Integration Plan, that is intended to provide a sound planning framework for evaluating the performance of the Transport Sector, by providing the strategic framework and action plans to support the process of transport integration in Ghana over the short, medium and long-term (provisionally 5, 10 and 20 years);
- Strategic Environmental Assessment (SEA) of the relevant components of the plan and the alternative options, to ensure that environmental considerations are mainstreamed into Transport Sector planning;
- A set of indicators enabling the sector to monitor its performance;
- Technical assistance to improve sector public finance management;
- Technical assistance to support policy implementation and planning in the sector;
- Capacity building at the Ministry of Transportation.

On 22nd December 2008, M/s Mott MacDonald Ltd, in association with Municipal Development Collaborative Ltd, was awarded the contract to carry out the Strategic Environmental Assessment of the Transport Integration Plan.

## 1.2 The SEA of the Integrated Transport Plan

The approach of the SEA broadly follows the Ghana Environmental Protection Agency's (EPA) approach to carrying out the SEA for the National Transport Policy (NTP), and is based on the EPA's *Review of the Strategic Environmental Assessment (SEA) in Ghana* which was launched in May 2009. The latter provides recommendations for good practice and is currently regarded as the guidance document for the conduct of SEAs in Ghana. In addition, experiences and approaches from various other documents have been drawn upon, including the UK Department of Transport's *Strategic Environmental Assessment for Transport Plans and Programmes* Transport Analysis Guidance Unit 2.11 (which is derived from the EU SEA Directive), *the Practical Guide to the Strategic Environment Assessment Directive* (Office of the Deputy Prime Minister, 2005) and *Applying Strategic Environmental Assessment* (OECD, 2006).

The Ghana SEA approach at sector level involves the following steps:

Step 1: Preparation / Screening

Step 2: Scoping

Step 3: Assessment

Step 4: Monitoring and Evaluation

Step 5: Reporting

### (i) Preparation / Screening

A notable outcome of the Ghana Poverty Reduction Strategy (GPRS) (2002) was the realisation that SEA is a valuable tool in ensuring environmental sustainability, and as a result SEA tools have been incorporated into the National Development Planning Commission's (NDPC) Planning Guidelines for both Sectors and Districts.

Goal 6 of the National Transport Policy stresses the need for sustainable development in the Transport Sector, and requires that SEAs will be carried out on all transport policies, plans and programmes, ensuring environmental and cost benefits and risks are considered for each transport mode.

The SEA of National Transport Policy (*Strategic Environmental Assessment of the Transport Sector, Ghana, June 2007*) reaffirms the need for SEAs to be conducted for all Transport Sector plans and programmes in order that environmental considerations may be mainstreamed into these plans and programmes. With regard to the Integrated Transport Plan[1], the reasoning was that one plan option is to be selected from various proposed options, and one of the criteria for selecting a preferred option will be its environmental effects. The EPA confirmed that an SEA is necessary in this case.

Moreover, if one were to follow the screening process as set out in Directive 2001/42/EC of the European Parliament and of the Council on the Assessment of the Effects of Certain Plans and Programmes on the Environment (referred to as the EU SEA Directive) and apply it to the Ghanaian context, it is evident that an SEA is required for the Integrated Transport Plan (ITP) since:

[1] The Integrated Transport Plan (ITP) is also referred to as the Transport Integration Plan (TIP). However, EGIS BCEOM, the Consultant developing the plan refers to it as the ITP, and we have chosen to do the same for the sake of consistency.

- It is subject to adoption by a national authority;
- It is a regulatory provision that is likely to be required by legislation in the near future;
- It applies to the Transport Sector and sets a framework for future development consent;
- It does not determine the use of small areas at local level, nor is it a minor modification to an existing plan;
- It does not serve defence or civil emergency purposes.

The SEA of the ITP was therefore included as a component of the Transport Sector Planning and Integration Programme (TSPIP).

### (ii) Inception Phase

The Inception Phase is considered to be part of the Preparation step. The Inception Phase of the SEA was carried out in February and March 2009. Inception Phase activities included:

- Mobilisation activities;
- Document acquisition and review;
- The preparation of a working paper on the legal, regulatory and institutional framework for environmental management in Ghana;
- Stakeholder identification and analysis, the development of a stakeholder consultation plan and preparation of a preliminary stakeholder events calendar;
- A review of activities to be undertaken for the SEA in order to establish changes to our approach and methodology and workplan;
- Highlighting issues to be resolved in order to enable smooth implementation of the SEA of the ITP.

The Inception Report was submitted on March 4$^{th}$ 2009.

### (iii) Scoping

Scoping allows the analysis and environmental reporting activities to be better focussed, as it will:

- Identify the key issues to be assessed, and hence guide the amount of detail required in the Environmental Report;
- Give an outline of the assessment approach to be adopted in the Analysis Phase, including the use of SEA tools;
- Examine the compatibility of the ITP objectives against SEA objectives;
- Facilitate early stakeholder involvement, which assists in the provision of data as well as identifying potential problems early on in the planning process.

This report documents the Scoping Phase of the SEA

### (iv) Assessment, Monitoring and Evaluation and Strategic Recommendations

The Analysis Phase of the study will take place after scoping. This phase will involve subjecting the Draft Integrated Transport Plan to consultation, predicting and assessing the environmental effects and then developing mitigation measures or strategies to avoid adverse effects altogether.

Collection and analysis of baseline data will continue in this phase of the SEA to support the various SEA processes.

The plan will be analysed using a number of SEA tools, including a compatibility test, a sustainability test and identification of risks and opportunities. This will serve to refine the plan, and may also highlight the need for additional institutional or legal prescriptions.

During the Environmental Strategy Phase, the SEA will formulate recommendations, and propose a monitoring plan for incorporation and implementation of SEA recommendations into the ITP. At this point strategic indicators will be defined in order to facilitate the monitoring process. Should the ITP planners opt not to include or take on board any of the SEA recommendations, they will be obliged to provide justification for doing so (this is a requirement of the EU Council Directive 2001/42/EC).

The SEA Report (referred to as the Environmental Report in our Terms of Reference) will document the findings and recommendations of the SEA, as well as the monitoring indicators and the monitoring plan.

## 1.3 Objectives of the SEA Study

While the overall objective of the SEA study is to mainstream environmental[2] considerations into Transport Sector planning, specific objectives of the SEA of the ITP have been developed as part of this Scoping Phase. In developing the objectives of the SEA, the following types of objectives need to be distinguished (refer ODPM, *A Practical Guide to Strategic Environmental Assessment Directive*, 2005):

i. The objectives of the Integrated Transport Plan;

ii. External objectives, such as those that need to considered independently of the SEA process, for example national and international objectives for environmental sustainability;

iii. The objectives of the SEA based on the identification of environmental sustainability concerns, and against which the environmental effects of the Integrated Transport Plan will be tested.

These objectives are described in this report culminating in the development of the SEA objectives in Chapter 6.

[2] The term "environment" in relation to this SEA covers the bio-physical, , sociological / socio-cultural (including gender), and institutional environments in which decision are made (ref: SEA of the GPRS, 2004).

# 2 Integrated Transport Plan

## 2.1 Objectives of the Transport Integration Plan for Ghana

As indicated above, the Transport Integration Plan for Ghana is one of six EU-financed components of the TSPIP. As with the SEA, this project is being supervised by the Ministry of Roads and Highways. EGIS BCEOM International is the lead consultant in a joint venture with Associated Consultants, Ghana (ACON).

The specific objective of the Transport Integration Plan, as stated in the Terms of Reference, reiterates the TSPIP's overall objective, ie. to "*provide a sound planning framework for the Transport Sector, informing the sector's service and investment priorities, meeting the needs stemming from economic development, regional integration and social cohesion, as defined in the national development agenda*".

The various project outputs aim to support the implementation of:

i. A process – comprising guidelines, tools, facilitation and technical support for transport planners to gradually reinforce and support the implementation of integrated transport planning in Ghana;

ii. An Integrated Transport Plan, becoming the primary planning document for the Transport Sector, and taking over from the Transport Sector Development Programme (TSDP).

The ultimate purpose of the ITP is "the integration of economic and transport planning into Government decision making in Ghana". The project commenced in November 2007 and is due for completion in June 2010. A Draft Integrated Transport Plan is due in mid December 2009 and the Final Integrated Transport Plan is expected to be completed at the end of March 2010.

## 2.2 Planning Process and Plan Preparation

The introduction, and subsequent implementation, of an integrated economic and transport planning process poses many challenges for which a range of reports, guidelines and decision making tools are being developed. These include:

- Economic forecasts;
- Forecasts of various socio-economic factors at district, regional and national levels where possible;
- Commodity production forecasts and transport demand forecasts based on commodity sector development plans and origin-destination (OD) Surveys of national routes;
- A transport planning model, fully calibrated to the Ghanaian environment;
- A multi-criteria evaluation manual;
- Transport costing model;

- Financial planning guidelines;
- A report on integration measures.

The ultimate outcome of the project will be an Integrated Transport Plan.

## 2.3 Relationship between ITP and Other Relevant Policies, Plans & Programmes

### 2.3.1 Growth and Poverty Reduction Strategy

The Growth and Poverty Reduction Strategy (GPRS II, 2006-2009) sets the current national development agenda for Ghana. The basic goal of the GPRS II is to *achieve accelerated and sustainable shared growth, poverty reduction and promotion of gender equity, protection and empowerment of the vulnerable and excluded within a decentralised democratic environment*. It focuses on policies, strategies and programmes relating to continued macro-economic stability, prioritized private sector-led growth, vigorous human resources development, good governance and civic responsibility intended to accelerate the growth of the economy and reduce poverty in order to enable Ghana to achieve middle-income status within a measurable planning period. The broad objectives, which are referred to as the Medium Term Priorities, are:

1. Priorities for private sector competitiveness, including modernised agriculture; support services, namely transportation, energy, science and technology; development of additional sectors to support growth; and employment generation, improvement and expansion of safety nets, life cycle and environmental vulnerabilities;

2. Human resource development such as education, skills and manpower development; access to health care, malaria control and prevention of HIV/AIDS; population management, safe water and environmental sanitation, urban development and slum upgrading; social policy frameworks for mainstreaming vulnerability and exclusion;

3. Good governance and civic responsibility, including political governance, economic governance, promoting evidence-based decision making and improved access to rights and entitlements.

Growth for the GPRS II is expected to be propelled by the agricultural sector, but other sectors, such as mining, tourism, and light industries, are also expected to contribute. A major challenge to achieving this growth was identified as being inadequate transport infrastructure, since transport is considered to be a strategic support service (others being energy, science and technology). In this regard, the broad policy objectives are to "*ensure the provision, expansion and maintenance of the appropriate transport infrastructure which strategically links the rural and urban production centres, while ensuring the provision of affordable and accessible transport system that recognises the needs of people with disabilities*". Specifically, it establishes three policy statements for support services through improving transport infrastructure, that is road, rail, water and air transport, viz:

1. Ensure the provision, expansion and maintenance of transport infrastructure of all kinds.

2. Ensure the provision of affordable and an accessible transport system.

3. Develop and strengthen the appropriate legal, institutional and regulatory framework to regulate all modes of transportation to ensure an efficient transport system.

Strategies for these policies are shown in Box 2-1 below.

**Box 2-1: GPRS II Transport Infrastructure Policies and Strategies**

| GPRS Transport Infrastructure Policies | GPRS Transport Infrastructure Strategies |
|---|---|
| 1. Ensure the provision, expansion and maintenance of transport infrastructure of all kinds. | 1.1 Increase spatial access to markets through improvement in farm roads to markets.<br>1.2 Maintain and expand feeder roads.<br>1.3 Construct and rehabilitate more access roads in the urban centres.<br>1.4 Rehabilitate or develop on major road linking rural and urban markets in every region.<br>1.5 Develop and rehabilitate major highways in the country.<br>1.6 Enhance regional co-operation and trade through cross-border road infrastructure development.<br>1.7 Develop and maintain all access routes leading to the Volta Lake.<br>1.8 Provide adequate and modern railway terminals and platforms.<br>1.9 Promote the development of a well integrated and modernised rail track system.<br>1.10 Link the northern part of the country to the south through an efficient rail network.<br>1.11 Maintain and provide efficient modernised ports and harbours infrastructure across the country.<br>1.12 Promote the development of regional rail network and ports facilities.<br>1.13 Encourage general aviation and aviation support services such as the use of micro light aircraft in agriculture, passenger transport and heath delivery services.<br>1.14 Development of airstrips in remote areas. |
| 2. Ensure the provision of affordable and an accessible transport system. | 2.1 Sustain the development of mass transportation system for road.<br>2.2 Promote the development of disability friendly public transport system for all modes of transportation.<br>2.3 Promote the development and use of Intermediate Modes of Transport (IMT).<br>2.4 Provide a smooth affordable and safe water transport system for the country.<br>2.5 Sustain the development of mass transport for rail and water modes of transport<br>2.6 Provide efficient and reliable port services.<br>2.7 Promote the integration of all modes of transport.<br>2.8 Promote sub-regional rail and ports management system that ensures efficient movement of goods and humans across borders.<br>2.9 Promote high safety, security and environmental standards for the aviation industry.<br>2.10 Promote the development of human resource and the use of Information Communications Technology (ICT) in the aviation industry. |
| 3. Develop and strengthen the appropriate legal, institutional and regulatory framework to regulate all modes of transportation to ensure an efficient transport system. | 3.1 Streamline transport regulation and enforcement.<br>3.2 Promote road safety and traffic management scheme to reduce road and traffic accidents.<br>3.3 Promote private sector involvement in the road sector financing, construction and maintenance.<br>3.4 Strengthen local capacity in both consulting and construction services and Government institutional capacity in the road sector.<br>3.5 Support small scale contractors through the classification and registration process.<br>3.6 Promote effective and sustainable maintenance of the road system (through government decentralisation programme).<br>3.7 Promote rail and water safety management scheme to reduce boat disasters and derailment.<br>3.8 Promote private sector involvement in port services and in the financing, construction and maintenance of rail services.<br>3.9 Strengthen local capacity in both consulting and construction services and government capacity in the road, rail and marine sector.<br>3.10 Develop appropriate legal and institutional framework to ensure security at the rail and other terminal facilities. |

| GPRS Transport Infrastructure Policies | GPRS Transport Infrastructure Strategies |
|---|---|
| | 3.11 Strengthen regulatory and institutional framework for efficient ports, rail, water and air transport system.<br>3.12 Restructure Ghana Civil Aviation Authority to play its role as an independent regulator.<br>3.13 Promote private sector involvement in the investment and management of aviation infrastructure and equipment.<br>3.14 Adequately develop the road fund to fully cater for the annual road maintenance |

*Source: NDPC (2005); Growth and Poverty Reduction Strategy (GPRS II) (2006-2009).*

Improving overall road maintenance, and rehabilitating farm-to-market roads, bridges and ferries would lower transportation costs and integrate rural economies with the urban economy. It would also lengthen vehicle life, reduce transportation costs and save foreign exchange in fuel and spare parts imports, and generate savings in travel time. Some of the strategies proposed to achieve these stated objectives are to rehabilitate or accelerate the development of one major road linking rural and urban markets in every region; continue to develop and rehabilitate major highways in the country; provide adequate and modern railway terminals and platforms; promote the development of a well integrated and modern rail track system; maintain and provide efficient and modern ports and harbours infrastructure across the country; and construct three major highways to connect the trans-ECOWAS Highway, so that Ghana is able to take advantage of the opportunities from West African economic integration which will lead to the creation of jobs.

Other strategies include promoting the adoption of Intermediate Means of Transport (IMT), encouraging general aviation and aviation support services, passenger transport and health delivery, and the promoting sub regional transport systems including air transport that ensures efficient movement of goods and persons across borders.

The GPRS II recognizes that achieving these objectives will require an efficient institutional and regulatory framework. In this context it proposes strategies to, among others, promote road, rail, air and river transport safety and a traffic management scheme to reduce accidents; promote private sector involvement in the financing, construction and maintenance of road and rail services, as well as provide entry points and terminal services; strengthen local capacity in both consulting and construction services and government capacity in the road, rail, air and marine sectors; and promote private participation in the investment and management of aviation infrastructure and equipment.

### 2.3.2 National Transport Policy

The GPRS II, the Millennium Development Goals (MDG), the New Partnership for African Development (NEPAD) and ECOWAS growth objectives led to establishing Transport Sector requirements to achieve the national development goals. The National Transport Policy defines priorities and objectives to fulfil these requirements, which are expected to be realised through the proposed Integrated Transport Plan.

The vision of the National Transport Policy is an "*integrated, efficient, cost-effective and sustainable transportation system responsive to the needs of society, supporting growth and poverty reduction and capable of establishing Ghana as a transportation hub of West Africa*. The Mission of the Transport Sector is to "*provide leadership and an enabling environment for the development and maintenance of Ghana's transportation system through effective policy formulation, market regulation, asset management and service provision"*.

Throughout the policy, the emphasis is on the Government's long standing objective of establishing "*an efficient modally complementary and integrated transportation network for the movement of people and goods at the least possible cost within the country, as well as to and from the country, both regionally and internationally*".

As part of the development of the NTP, a Strategic Environmental Assessment of the NTP was conducted between 2006 and 2007 (EPA, 2007). This ensured that environment was mainstreamed into the policy, and that issues such as air quality, noise nuisance and climate change were incorporated as considerations of the policy. The SEA also developed policies, regulatory and institutional mechanisms, as well as approaches for strategic assessment, to enable the integration of environmental management practices into future Transport Sector planning.

To this end, the NTP sets seven goals, each having a number of policy statements and implementation strategies. These are summarised in Box 2-2 below.

**Box 2-2: National Transport Policy of the Goals and Policies**

| Goal | Policy Statements |
|---|---|
| 1. Establish Ghana as a transportation hub for the West African Sub-Region. | - Ghana's liberation policy for the aviation sector will be expanded with more emphasis on improving efficiency in Ghana's airports to increase competition with other sub-regional airports.<br>- Competition will be increased in airport and maritime port services to reduce costs and improve overall service.<br>- Transport corridors will be developed to improve trade opportunities within Ghana and with neighbouring countries. |
| 2. Create an accessible, affordable, reliable, effective and efficient transport system that meets user needs. | - Transport infrastructure investment will be targeted to better serve population, production and tourist centres aiming to reduce overall transport costs to government and users.<br>- Mass transportation will be prioritised in urban areas, aiming to move at least 80% of passengers.<br>- Non Motorised Transport (NMT) infrastructure shall be developed to improve affordability and accessibility for urban and rural communities – aiming for 10% of passenger movement.<br>- A bulk goods transportation strategy will be developed based on specific user needs, identifying critical investments in the rehabilitation of railway and inland waterways infrastructure.<br>- Government shall play a lead role in the development and maintenance of aviation infrastructure in the regions in Ghana, satisfying socio-economic needs and encouraging new patterns of trade and travel.<br>- Utilisation of inland water bodies and maritime facilities will be increased by developing transport facilities that promote tourism and sporting activities.<br>- Accessibility for women, children, the aged and physically challenged shall be considered in transport facilities. |
| 3. Integrate land use, transport planning, development planning and service provision. | - Transport planning will be fully integrated with development planning and service provision. |
| 4. Create a vibrant investment and performance based management environment that maximises benefits for | - The private sector will be encouraged to invest in transport infrastructure and services where commercially viable.<br>- The "user pays" principle shall be applied to all transport services and maintenance of |

| Goal | Policy Statements |
|---|---|
| public and private sector investors. | infrastructure.<br>- Government will invest in transport infrastructure and subsidise transport services where they provide mainly social and environmental benefits important to users and the country.<br>- A performance-led approach, based on clear goals and measurable performance targets, evaluated and rewarded accordingly, will be applied throughout the supply chain of transport infrastructure and services. |
| 5. Develop and implement comprehensive and integrated policy, governance and institutional frameworks. | - Transport sector policies shall promote synergy between the requirements of international, regional, national development, inter-sectoral and modal objectives and the needs of transport users.<br>- An institutional framework will be established, separating functions of policy formulation, regulation, asset management and services. |
| 6. Ensure sustainable development in the Transport Sector. | - Strategic Environmental Assessments (SEA) will be carried out on all transport policies, plans and programmes, ensuring environmental and cost benefits and risks are considered for each transport mode.<br>- All transport infrastructure development and maintenance projects (above a certain threshold) will comply with existing environmental, health and safety regulations.<br>- Health and safety of communities, operatives and users shall be assured in all modes of transportation.<br>- Fuel efficiency, conservation and pollution control measures shall be promoted for road transportation. |
| 7. Develop adequate human resources and apply new technology. | - Key skills and competencies will be developed to meet the needs of the Transport Sector.<br>- Research on all aspects of Transport Sector performance will be carried out and applied by public and private sector organisations. |

*Source: Ghana National Transport Policy, 2008*

### 2.3.3 Transport Sector Development Programme

The Road Sector Development Programme (RSDP) was a five year multi-donor initiative to improve the road sector in Ghana. The RSDP ended in 2007, and was replaced by the Transport Sector Development Programme (TSDP), which is a more integrated programme of development activities for Ghana's Transport Sector for the period 2008-2012. The objective of the TSDP supports the Government of Ghana's fundamental transport objective of providing an efficient modally complementary and integrated transportation network. The Programme covers numerous activities designed to address each of the National Transport Policy goals, addresses all modes of transport and precedes the national Integrated Transport Plan.

# 3 Scoping of the SEA Study

Ghana's EPA scoping requirements as well as those of the EU, OECD, World Bank and African Development Bank were reviewed in order to determine the most appropriate scoping process for this SEA, given the need for flexibility in order to accommodate the changing timelines of the ITP process, and to enable broad stakeholder consultation.

## 3.1 EPA Ghana Scoping Requirements

The Environmental Protection Agency's *Review of the Strategic Environmental Assessment (SEA) in Ghana* (launched in May 2009, and currently regarded the guideline for conducting SEA in Ghana) indicates that scoping, as a minimum, should include the following:

i. Identification of key stakeholders, including justification of selected stakeholders to be involved;

ii. Sources of information, providing an overview of existing and relevant sources of information;

iii. Consultation meetings, involving one scoping workshop and additional consultations as required;

iv. Institutional analysis, describing legal issues, organisational framework and responsibilities; and

v. The Scoping Report, describing the focus of the Strategic Environmental Assessment, SEA tools, stakeholders to be involved and timing. This report is to be approved by the Project Steering Committee.

## 3.2 EU Directive Requirements

The EU Directive's requires that scoping activities set the context and objectives of the Strategic Environmental Assessment in order to set the scope of the SEA. These include:

i. Identifying other relevant plans, programmes and environmental protection objectives;

ii. Collecting baseline data;

iii. Identifying environmental problems;

iv. Developing the SEA objectives;

v. Consulting on the scope of the SEA.

## 3.3 Other Considerations

OECD, African Development Bank and the World Bank SEA guidelines emphasise the need for stakeholder consultation, collection of baseline data and the assessment of institutional capacities to manage risks and opportunities. African Development Bank guidelines also recommend the use of GIS in the depiction of baselines, but not necessarily in the Scoping Phase.

## 3.4 Scoping Methodology

### 3.4.1 Overview

Our scoping methodology is consistent with the EPA and EU requirements for activities to be done during this phase.

As part of the Inception Phase we carried out an initial analysis of stakeholders for engagement and consultation during all phases of the SEA study. Participants were categorised on the basis of their knowledge of transportation issues and their ability to influence the SEA process, and this then determined at what level and by what means they would be involved. The stakeholder analysis was then reviewed by participants at the Scoping Workshop held on 30th June 2009, and their additions and amendments sought so that a more comprehensive list of stakeholders is now available. This list will of course continue to grow as we consult and interact with more interested parties during the Analysis Phase of the study. This is discussed further in Section 4.3.3 below.

Also during the Inception Phase, we conducted a review of the institutional, legal and regulatory framework for environmental management in Ghana. In the Scoping Phase, we have refined this with a view to providing a basis for assessing the capacity of key institutions responsible for environmental sustainability issues.

One of the main objectives of the Scoping Workshop was to elicit from the stakeholders their main issues of concerns or desired outputs from the ITP process, ie. environmental sustainability criteria. This provided the basis for developing the objectives, aspects and indicators of the SEA study, and is discussed further in Chapter 6. The prioritised objectives have enabled us to identify the relevant baselines that need to be collected in the Analysis Phase, where that data can be obtained. Once the type and availability of data is established, we will, after scoping, assess whether measurable indicators are appropriate to ensure these objectives are met, or whether legal and regulatory changes are required in order that the objectives are met.

Having established the SEA objectives, we have prepared a compatibility matrix where the project evaluation criteria in the Multi Criteria Evaluation Manual (MCEM) developed by the ITP planners are compared with the environmental sustainability criteria that were identified during the SEA Scoping Workshop.

### 3.4.2 Changes in our Approach and Methodology

When we submitted our Inception Report in early March 2009, we were given to understand that the ITP planners would have completed the transport planning model by end March 2009, and that the data would be fed into the model to identify a number of projects, combinations of which would provide alternatives for the integrated transport plan would emerge by mid May 2009. Due to various reasons, this timeline had to be changed a number of times, and at the time of printing, it is anticipated that the Draft Integrated Transport Plan will now be completed in mid December 2009.

This has therefore meant that we have had to revise our methodology for the SEA again in order to accommodate the challenges experienced in the ITP process. For example, at the time of submitting the Inception Report, we had anticipated that certain activities that were originally scheduled for the Analysis Phase would have to be brought forward in order to synchronize with the ITP process work programme. Specifically these activities were the examination of possible alternatives that would emerge from the ITP model, and highlighting risks and opportunities to future development posed by the plan. However, these activities will now be undertaken in the Analysis Phase.

We had also anticipated subjecting plan scenarios to consultation. However, the plan scenarios will be prioritised based upon a multi-criteria project evaluation process developed by the ITP planners. The SEA process has been able to provide some feedback to the ITP planners, through recommendations for refining these criteria in line with environmental sustainability criteria that were identified by stakeholders during the Scoping Workshop. But overall the ITP planning process has not allowed for broad stakeholder consultation in the selection of priority projects that will make up the transport plan. Rather the Draft Integrated Transport Plan will be presented to stakeholders at workshops facilitated by the SEA process, after which workshop findings will be assimilated and recommendations put to the ITP planners for inclusion into the Final Integrated Transport Plan.

# 4 Stakeholder Consultation

## 4.1 Identification and Analysis

In consultation with various institutions and individuals the following criteria were used to identify and agree:

- Stakeholder organisations, institutions and agencies which would influence the outcome SEA process;
- Key persons or positions from the organisations, institutions and agencies who should participate in the SEA process;
- Mode/strategy of communications with each category of stakeholders.

Stakeholder criteria are presented in Box 4-1 below.

**Box 4-1: Stakeholder Criteria**

- Stakeholder – individual, institution, organisation, etc
- What/ whom he/she/it represents
- Stake in ITP and/or SEA
- Knowledge of Transport Sector Issues
- Ability to Influence Outcomes

Participants were then categorised according to knowledge of issues and their ability to influence the outcome of the project.

## 4.2 Consultation Plan

A communication strategy was then developed for future interaction with identified stakeholders in terms of the frequency of interactions and participation/involvement in the SEA process. Table 4-1 below summarises the stakeholder categories at the time of reporting, taking into consideration additions made at the Scoping Workshop by the participants.

**Table 4-1: Stakeholder Communication Strategy**

| No. | Category | Communication strategy | No. Currently Identified |
|---|---|---|---|
| 1 | key stakeholder / study coordinator | Close contact (phone calls, emails, frequent meetings, workshops) | 10 |
| 2 | important stakeholder | Regular interaction (emails, meetings, workshops) | 38 |
| 3 | Stakeholder of some importance | Intermittent contact (updates, workshops) | 50 |
| 4 | general stakeholder | Can be informed through e.g., the media, websites, etc | Indefinite |

*Source: SEA study and SEA Scoping Workshop, June 2009.*

In addition, during the Scoping Phase, two (2) articles on the progress and activities of the SEA of the ITP have been prepared and sent to the MORH for posting on the Ministry's website.

## 4.3 Scoping Workshop

### 4.3.1 Purpose and Objectives

Both the EPA's and the EU's scoping processes require stakeholder input in order to identify the objectives of the SEA. The EPA approach specifically recommends that a Scoping Workshop is held so that concerns and desired outputs expressed by stakeholders allow for the scope of the SEA study to be established. The purpose of the workshop was to scope the SEA study, in line with these requirements.

The principal workshop objectives were to facilitate broad stakeholder involvement in the development of the Integrated Transport Plan and associated processes, as well as to continue with the process of awareness raising and capacity building in the development of SEA in Ghana.

The specific objectives of the workshop were to:

- Obtain participants' views and comments on the stakeholder analysis;
- Establish stakeholders prioritised expectations of the outputs and benefits of an integrated transport planning process;
- Establish factors and conditions required for the success of an integrated transport planning process and plan;
- Inform the stakeholders on the baseline integrated transport network and the demand scenarios to be used for modelling the Integrated Transport Plan; and
- Identify stakeholders' perception of the main environmental sustainability (natural resources or bio-physical, socio-cultural, economic and institutional) issues of concern and desired aims with regard to the ITP. This would then form the basis for the scope of the SEA study.

### 4.3.2 Process

Workshop participants were based on the compilation of stakeholders as described in Section 4.1 above. A total of 56 persons participated from a range of organisations (see list of participants in Appendix B). While every effort was made to invite all those listed, it was decided that some groups would be consulted through focal group discussions during the course of the SEA process (for example gender interest groups, the Parliamentary Sub-Committee on Transportation, and Development Partners).

The Workshop started at 09:30 a.m. and ended at 17:00 pm. The full Workshop Programme is presented in Appendix B, while the main programme activities are described in Box 4-2 below.

**Box 4-2: Workshop Programme**

- Welcome address: Introducing ITP and the SEA
- Workshop Objectives and Process
- Description of the SEA of the ITP – Background, Process and Objectives
- Review of the Stakeholder Identification and Analysis Matrix
  Work Session 1: Stakeholder Matrix Update
- Description of the ITP – Background, Objectives, Process and Integration Issues
  Work Session 2: Outputs & Benefits
  Work Session 3: Factors for Success
  Group Presentations: Outputs & Benefits
  Factors for Success
- Forecasting Transport Demand
  Q&A: Forecasting Transport Demand
- Environmental Sustainability Criteria
  Work session 4: Main Environmental Sustainability Concerns related to the Transport Sector
- Next Steps and Wrap Up

The methodology used for the workshop was plenary input sessions by key speakers followed by Question and Answer sessions for clarification and participant inputs. Work sessions were conducted either on an individual basis or as group sessions. In all there were six groups, comprising between seven (7) and eight (8) individuals, and composed so that different types of stakeholders were represented in the various groups.

### 4.3.3 Summary of Workshop Outcome

The main objectives of the Scoping Workshop, namely broadening stakeholder involvement in the ITP process and informing stakeholders of the same, as well as continuing the process of awareness of SEA, were by and large achieved.

**Stakeholder Analysis Review**

During the workshop, participants were asked to review the stakeholder identification and analysis matrix and make amendments or additions as appropriate. A consolidated Stakeholder Matrix was then prepared – this appears in Appendix B.

**Integrated Transport Planning Process**

Participants were taken through the approach adopted for an integrated economic and transport planning process which involves macro-economic forecasts, socio-economic forecasts, alternative transport demands, diagnostics of a base network, analysis of supply scenarios, project identifying, evaluating and prioritising projects, analysis of regulatory and institutional issues; and plan formulation.

Two work sessions were held after the presentation on the ITP planning process. The first aimed to establish and prioritise expectations of the outputs and benefits of an Integrated Transport Planning process. Equitable distribution of State resources, an approach that facilitates effective national transport planning and resource allocation leading to coordinated and integrated development, and lower reconstruction costs of transport infrastructure were ranked as being the major benefits of the process. Other priorities are shown in Table 4-2 below.

**Table 4-2: Analysis Summary of Outputs and Benefits**

| Ranking | Benefit |
|---|---|
| 1 | Equitable distribution of State resources |
| 2 | Approach:<br>i. facilitates national planning and effective/ efficient resource allocation;<br>ii. offers a means of harmonizing development partner / sector interventions;<br>iii. leads to coordinated and integrated approach to development; and provides;<br>iv. seamless travel. |
| 3 | Lower reconstruction cost of transportation infrastructure. |
| 4 | Efficient allocation of right of way for utilities (electricity, water, gas, communication .etc). |
| 5 | Enhanced private sector involvement and maximized use of resources. |
| 6 | Improved private sector investment in Transport Sector; facilitate foreign direct investment; reduced burden on Government and leading to Government savings. |
| 7 | Reduced congestion (traffic) leading to time saving, reduced import bill on fuel, reduced emission ($CO_2$), improved productivity, reduced poverty and increased national incomes. |
| 8 | Facilitate foreign direct investment. |
| 9 | Reduces uncertainty and risk for investment. |
| 10 | Ensures stakeholders participation. |
| 11 | Easy access and affordable transport providing access to social service and reduced accidents and social vices, and highway robbery. |
| 12 | Leads to growth and poverty reduction. |
| 13 | Less environmental pollution. |

*Source: SEA Scoping Workshop, June 2009.*

The second session attempted to establish factors and conditions (i.e. the enabling environment) required for the success of an Integrated Transport planning process and plan. In terms of leadership, 'political will' was highlighted as being the major barrier to a successful ITP process and implementation of the plan, for which commitment was required from various government agencies from the Office of the President to the Public Services Commission, the NDPC, and other line ministries. To achieve this there was a need for sensitisation / training (and re-training) of leaders, as well as de-coupling technical aspects from politics.

Stakeholders found that challenges with regard to coherence – in terms of policy, governance and institutional frameworks – were due to inconsistency and changes in policies, plans and programmes (sometimes brought about by political influences). The stakeholders identified the NDPC as being the institution responsible for ensuring coherence.

Lack of reliable data and a system for managing that data was considered a barrier which could be addressed by setting up data management systems, providing adequate resources for data collection and management, and training personnel to properly handle that data. The responsible agency in this case was identified as being the Ghana Statistical Service.

With regard to working practices, capacity and institutional coordination, the barriers were associated with lack of management/motivation/leadership, lack of resources, poor inter-sectoral coordination. This can be addressed through capacity building and enhancing skills in managerial practices, and was seen to be the responsibility of all Ministries, Departments and Agencies (MDAs) as well as training institutions.

The main barrier in terms of follow-through were identified as poor reporting/recording systems leading to lack of or ineffective monitoring and evaluation systems. To address this, it was noted that adequate resources and proper supervision were required, and effective monitoring and evaluation systems should be put in place.

Financial constraints were due to lack of revenue generation (and data for this), and a narrow tax net. Here the MOFEP and Inland Revenue Service, Customs, Excise and Preventive Services Department, among others, would have to ensure adequate budget allocations, widen the tax net, and establish an effective data bank for areas of revenue generation.

**Forecasting Transport Demand**

The systematic forecasting of transport demand is based on a process of financial analysis, data collection, model calibration, socio-economic forecasting, scenario building and testing and project evaluation.

In the Question and Answer Session that followed, stakeholders raised issues on:

- Which agency should be responsible for operating the integrated transport;
- Funding sources with fares as a factor for revenue generation;
- Issues of lower transport cost vis-a-vis lower construction costs;
- Defining the role of the NDPC and the various sectors involved in, and affected by, transportation;
- Defining the coordination that should exist between the NDPC and the various sectors to implement all agreed plans;
- Empowering District Assemblies to produce good plans to fit into the NDPC plans;
- Compliance by the various sectors with NDPC guidelines;
- Factors causing the ineffectiveness of NDPC to plan and take decisions;
- Sources and bases of forecast data, including variables used to determine expected growth. In this regard, the difficulties in obtaining data in Ghana were noted. Stakeholders questioned the base data vis-a-vis projections of urbanization, and also that cement demand was taken to be constant over the entire plan period. In addition, they highlighted the need for consideration of international traffic, and political and social factors, on traffic demand.

**Environmental Sustainability Criteria**

Finally participants reviewed a pre-drawn list of environmental sustainability criteria (based on previous SEAs of GPRS, NTP and also national and international objectives) in their work groups and added or amended the list. They prioritised the three (3) most important concerns – issues and desirable outcomes – of the Transport Sector under each of the main environmental sustainability pillars (natural resources or bio-physical, socio-cultural, economic and institutional) with regard to the ITP process and plan. The results of the group session are presented in Table 4-3 below.

**Table 4-3: Analysis: Environmental Sustainability Concerns**

| Pillars of Sustainability | Concerns | Overall Ranking |
|---|---|---|
| Natural Resources or Bio-physical | Air quality | 1 |
| | Spillage of hazardous chemicals | |
| | Loss of biodiversity | 3 |
| | Loss of habitat (of flora and fauna) | |
| | Water quality | 3 |
| | Land degradation | 2 |
| | Waste generation | |
| | Prevention of floods | |
| | Noise and vibration | |
| Social and Cultural | Accessibility by ALL to transport services | |
| | Accessibility by ALL to basic social and technical services through transportation | 3 |
| | Transportation safety | 1 |
| | Congestion | |
| | Loss of land, crops, property | |
| | Relocation and involuntary resettlement | 2 |
| | Gender mainstreaming with emphasis on women's participation at all levels | |
| | Public health, including STD/HIV/AIDS, noise, air quality | 3 |
| | Access to information | |
| | Cultural diversity and heritage | |
| | Indigenous knowledge possessed by both men and women | |
| | Livelihood strategies | |
| | Changes in land use | |
| | Severance of communities | |
| | Equity and Social cohesion | |
| Economic | Economic growth and stability | 1 |
| | Productivity / time loss | |
| | Job creation and income generation through investment | 2 |
| | Fuel consumption | |
| | Cost recovery for sustaining provision of services | |
| | Affordability of transportation services by ALL | |
| | Trade and commerce | |
| | Poverty reduction | 3 |
| | Labour standards | |
| | Support for mass transport operators and hauling services | |
| Institutional | Good governance | 1 |
| | Dissemination and acceptance of policies, plans, programmes and legislation | |
| | Private sector participation and protection of investment | 3 |
| | Inter/cross sectoral institutional collaboration and coordination roles and mandates | 2 |
| | Structures for monitoring, enforcement and compliance | |
| | Institutional strengthening and capacity building | 2 |
| | Feasibility of options in the local context (reality check) | |

*Source: SEA Scoping Workshop, June 2009.*

Analyses of the workshop sessions are provided in Appendix B. Workshop proceedings were sent to all participants, and the full Scoping Workshop Report can be obtained from our Project Office in East Legon, Accra.

## 4.4 Additional Stakeholder Concerns

### 4.4.1 Oil and Gas Conference for the Transport Sector

On 15th and 16th July 2009, the Ministry of Transport hosted the Oil and Gas Conference for the Transport Sector, the theme being: *Positioning of the Transport Sector for the Successful Exploitation of Ghana's Oil and Gas*. The idea was to establish transportation and transport infrastructure requirements resulting from the exploitation, pumping, storage and offloading of recently discovered oil and gas in the Jubilee Field, some 63 km offshore from Takoradi.

Some of the issues raised by presenters and participants that are relevant for consideration during the development of the Integrated Transport Plan were:

- Transportation safety, in terms of preparedness and response, for both land- and sea-based transport operations;
- Multi-modal approach to transport safety and security;
- The role of Ghana Air Force and Ghana Navy in emergency response and rescue operations;
- Given the efficiency of transportation of oil by ship, consideration to using inland waterways (Volta Lake) for this purpose;
- The strategic role of aviation in economic development of the country, which would contribute to Ghana becoming a regional transportation hub;
- The advantages of transporting freight by rail rather than road, where the investment in rail is more economic in the long term;
- The Railway Act, 2009 (Act 779) which emphasises the need to revive the rail network for the transportation of bulk goods;
- Transportation by pipeline (of both oil products and water) is often overlooked and under-emphasised;
- Impacts of relocation, resettlement, and compensation resulting from all types of transportation projects.

### 4.4.2 Focus Group Discussions

#### (i) Development Partners

On 21st July 2009, a focus group discussion was held with the Development Partners at the Department of Feeder Roads Conference Room. Nine participants attended, representing four development partner organisations, the EPA and transport agencies. A list of participants is provided in Appendix C. Issues raised during this discussion included:

- The need to consider adaptation to climate change, given that sea levels are likely to rise, and there will be increased incidence of floods and drought.

- Representatives from all the political parties, together with the Parliamentary Sub-Committee on Transportation and the National House of Chiefs, should be consulted as a focus group. This is to ensure buy-in and commitment of the parties so as to avoid the situation where policies, plans and programmes are discontinued when governments are changed.

- Consideration to using the compound matrix tool in the Analysis Phase in order to capture the poverty dimensions of the ITP;

- The need for the ITP planners to consider unlocking untapped areas of the country by providing transport infrastructure to those areas.

- The plan should consider maritime ports as a transportation hub, urbanisation trends and migration flows, and the transport demands of the recent oil and gas find.

- The need to provide measurable data to the ITP planners in order that they can incorporate these recommendations in their model.

- Drivers for the plan should go beyond the four step model approach, which relies on limited data, related only to current transport trends and projections based on these.

- The plan should therefore consider means to satisfy transportation needs, as well as transport demand. Currently the model is demand-based.

- In terms of needs, some factors are not measurable, for example adaptation to climate change or disaster relief, but these must be factored in during the development of the plan.

- Where measurable data is required but not available, correlations can be made with other types of measurable data to obtain the required information. Alternatively studies can be commissioned to obtain this data in order to influence transport planning in the future.

### (ii) Gender Interest Groups

Subsequently on 22nd July 2009, another focus group discussion was held at the Project Offices with gender interest groups. In this case six persons attended from six different gender interest groups, and the list of participants appears in Appendix C. Major concerns raised revolved around women's participation in decision making, work load and access to resources and opportunities.

- The plan needs to address poverty, as the bulk of women's problems are generated by poverty.

- Women are the major users of inland water transport, and should be included in the ITP. Inland water transport should also be linked to rail.

- Women are the major agricultural producers, and so efficient, reliable, affordable, comfortable and safe transport is critical for their economic well-being. Many of the crops are perishable and need to rapidly reach both local and export markets.

- Better transport networks will allow food distribution agencies to buy produce at the farm gate, so that producers get better prices for their goods.

- Expansion of the rail network is important, especially northwards to Upper East and Upper West Regions, and beyond to provide links to Burkina Faso and Niger. The north of the country is regarded as the bread basket of Ghana, yet transportation links to major markets is poor.

- Expansion of the rail network would divert bulk goods (such as cassava and maize) from the roads, and this would have an impact of enhancing road safety.

- The plan should consider a transportation network, as opposed to corridors.

- Better transport networks will provide opportunities for service providers, such as water vendors.

- Transport solutions that reduce vehicular emissions should be considered.

- Regulations relating to safety should be enforced.

- Public transport forms the major means of transportation for women, and should be considered in the plan.

- Provision for non-motorised transportation, for example bicycles and donkey carts, need to be considered.

- Delays caused by the current transport system leads to promiscuous behaviour (especially between drivers/drivers' mates and vulnerable young girls/women), leading to the spread of STD/HIV/AIDS

- Provision of amenities, such as rest stops, lay bys and terminals, along major trunk roads will enhance road safety.

- For the physically challenged, the preferred mode of transport is air, then rail and then road. However, air being very expensive, rail was considered the best choice.

- Lack of data and its management makes planning and decision making difficult.

### (iii) Others

During the course of the study, other issues were raised by stakeholders who were consulted outside the Scoping Workshop. These include:

- The Ghana Water Company is a major transporter of water, and as water source supplying Accra through the pipeline begins to dry up, the need for haulage of water from other sources will result in an increase in the number of water tanker plying the roads.

## 4.5 Conclusions from Stakeholder Consultations

During the Scoping Workshop, the main concerns and desired outputs prioritised by stakeholders were:

- *Environmental considerations*: specifically impacts on air quality, loss of biodiversity and habitats, land degradation and water quality due to transportation projects;
- *Social / socio-cultural considerations*: Transportation safety, relocation and involuntary resettlement, accessibility by all to basic social and technical services through transportation, and public health concerns, especially implications on HIV/AIDS;
- *Economic considerations*: economic growth and stability, job creation and income generation through investment, poverty reduction;
- *Institutional considerations*: good governance, inter and cross-sectoral institutional collaboration and coordination roles and mandates.

The ITP planning process needs to deliver solutions that address stakeholder concerns with regard to:

- In addition to roads, the provision of, and access to, transportation through other modes of transport, particularly rail and inland waterways, but also pipelines, maritime and aviation;
- A multi-modal approach to deal with transport safety and security;
- The provision of transport solutions to enable adaptation to the effects of climate change;
- Strategically linking rural and urban production areas, so that untapped areas in the country can be opened up to development.
- The development of a transport network, rather than transport corridors.

In all cases, stakeholders appreciated the opportunity of participating in the SEA process, and to be able to express their views on the integrated transport planning process and plan.

# 5 National and International Environmental and Social Objectives

Transport Sector objectives in terms of policy and planning have been discussed in Section 2.3 of this document. However, the consideration of national- and international-level environmental objectives within the SEA is intended to address the influence of external objectives which form part of the wider objectives of the SEA. This chapter describes national and international objectives relevant to the Transport Sector.

## 5.1 National Level Objectives

### 5.1.1 National Policies

#### (i) Constitution of Ghana

National policy and plan objectives relevant to environmental, social, socio-cultural and socio-economic well-being are directed by the Constitution of Ghana. The Constitution states, among others, that:

- The State shall promote just and reasonable access by all citizens to public facilities and services in accordance with law.
- The State shall cultivate among all Ghanaians respect for fundamental human rights and freedoms and the dignity of the human person.
- The State shall actively promote the integration of the peoples of Ghana and prohibit discrimination and prejudice on the grounds of place of origin, circumstances of birth, ethnic origin, gender or religion, creed or other beliefs.
- The State shall take appropriate measures needed to protect and safeguard the national environment for posterity; and shall seek co-operation with other states and bodies for purposes of protecting the wider international environment for mankind.

The Constitution further states that in order to achieve these objectives, the State shall take appropriate measures to provide adequate facilities for, and encourage, free mobility of people, goods and services throughout Ghana, and that as far as practicable, a government shall continue and execute projects and programmes commenced by the previous Governments.

The country's stated long-term goal is to develop a society that is capable of achieving middle-income status. This means significantly raising the standard of living of Ghanaians by steadily increasing the economic growth rate from its present level of between 4-5% to 7-10% in the medium term and 11-15% in the long term. The GPRS strategies described earlier in this report are based on these goals.

### (ii) National Environmental Policy

Ghana's broad national-level environmental objectives are enshrined within the National Environmental Policy (NEP) which was adopted in 1991 to ensure that the environment was considered as a significant component in Ghana's development. The goal of the policy is to ensure sound management of the environment and the avoidance of exploitation of resources in ways that may result in irreparable damage to the environment.

The NEP aims to ensure that a 'preventive approach' is adopted in the pursuit of sound environmental management. The fundamental objectives of the policy are being addressed through the enactment and enforcement of relevant legislation and also through the implementation of a plan of action.

The policy objectives cover the following:

- Maintenance of ecosystem and ecological processes essential for the functioning of the biosphere;
- Sound management of natural resources and the environment;
- Protection of humans, animals and plants and their habitats;
- Guidance for healthy environmental practices in the national development effort;
- Integration of environmental considerations in sectoral, structural and socio-economic planning at all levels;
- Seeking common solutions to environmental problems in West Africa, Africa and the world at large.

All of the above are relevant when considering the effects of various developmental activities within the Transport Sector.

### (iii) Forest and Wildlife Policy

The Forest and Wildlife Policy (1994) is aimed at developing a national forest estate and timber industry to provide the whole range of benefits required by society in a sustainable manner including the conservation of Ghana's environmental and cultural heritage. The policy objectives include:

- Management and enhancement of Ghana's permanent estate of forest and wildlife resources;
- Promotion of viable and efficient forest-based industries, particularly in secondary and tertiary processing;
- Promotion of public awareness and involvement of rural people in forestry and wildlife conservation;
- Promotion of research-based and technology-led forestry and wildlife management, utilization and development;
- Development of effective capability at national, regional and district levels for sustainable management of forest and wildlife resources.

### (iv) National Energy Policy

The draft National Energy Policy (currently under review) is intended to provide the needed framework for the energy sector to play its critical role in Ghana's socio-economic advancement and has the following objectives:

- To rehabilitate and expand energy production and supply infrastructure to maintain supply adequacy;
- To secure future supply of energy;
- To accelerate the development and exploitation of indigenous energy resources to assure a high level of self-sufficiency;
- To manage the rapidly growing demand for energy;
- To increase access to high quality energy services especially to the poor;
- To ensure energy supply in an environmentally acceptable manner;
- To ensure end-use efficiency to reduce environmental impact of energy supply and use; to manage the future energy delivery by reformation of the sector and building human resource and R&D capacity in energy production and supply.

### (v) Gender Policy

There is a currently a policy vacuum which has to be addressed to serve transportation related needs of Ghanaian women. Women are weakly represented in the transport profession and policy makers have failed to develop policy alternatives such as the creation of transport user groups which have appropriate gender representation. The transport profession receives little or no feedback from women on the inadequacies of transport systems despite the centrality of women in the provision of the agricultural transport system. Women are part of the transport structure of Ghana, as is in the rest of Africa. In rural areas, women carry more of the transport burden on their backs and on their heads than motorised transport.

The Strategic Country Gender Assessment (SCGA) (2002) indicates that gender disparities persist, and that gender inequality is costly to Ghana's economic and social development and for the realization of Ghana's growth and poverty reduction objectives. Women predominate among the core poor. Gender differences in labour force participation and earnings, in time allocation, in schooling and literacy, in health and the impact of HIV/AIDS, and in access to and control of a wide range of human, economic, and social capital assets are impediments to growth and poverty reduction in Ghana.

The SCGA reveals that village transport surveys in the country show that women spend nearly three times as much time in transport activities compared with men, and they transport about four times as much in volume. Women's transport needs are typically more complex than those of men; adequately responding to these needs could increase women's contribution to economic productivity and qualitatively improve household welfare. Women's access to transport further determines their utilization of existing health and other services, and particularly affects the ability of female children to attend school.

The assessment further concludes that men and women differ in their access to, and control over, these assets. Economic capacities and incentives are therefore, strongly, gender-differentiated in ways which affect supply response, resource allocation within the household, labour productivity, and welfare. These differences have implications for the flexibility, responsiveness, and dynamism of the economy, and directly limit economic growth which are, particularly worsened by the inadequacies of the transport system in Ghana

Ghana is currently using the SCGA to draft a Gender Policy document. The SCGA document considers gender as an economic and not just a social (or social sector) issue as gender affects economic performance and growth. The SCGA, therefore, recommends that policy makers consider the following principles in crafting Ghana's Gender policy:

- Men and women both play important roles in the Ghanaian economy.
- These roles are relevant for poverty reduction, and for policies aimed at rapid, sustainable, and better distributed growth.
- The uneven distribution of men and women across the economy means that different sectoral investment and growth patterns make different demands on men's and women's labour, and have different implications for the division of labour and the distribution of income.
- Improving labour productivity and access to and control of economically productive assets, especially for females, is important for growth, agricultural performance, food security, household welfare, and poverty reduction.
- Documenting men's and women's economic roles, including in the informal sector about which little is known, is an important building block for country work so as to develop gender-inclusive and pro poor growth strategies.

### (vi) National Food and Agricultural Sector Development Policy

Based on the role of agriculture in the national development framework, the objectives of the National Food and Agriculture Sector Development Policy of 2007 (FASDEP II) are:

- Food security and emergency preparedness;
- Improved growth in incomes;
- Increased competitiveness and enhanced integration into domestic and international markets;
- Sustainable management of land and environment;
- Science and technology applied in food and agriculture development and improved institutional coordination.

Under the policy framework there are two linked transport related policies to agriculture. These are:

1. Enhanced infrastructure development: Under this, the priority objective is to accelerate the provision of relevant infrastructure to support improved production and to generate gainful employment so as to reduce urban and rural poverty. The strategy is focused on creating an enabling environment to stimulate private sector investment and growth, particularly agriculture and industry. The transport (including road, rail, water and air transport) and construction sub-sector, in particular, will have to continue the significant increases in growth under the GPRS I, which increased road construction and other infrastructural development throughout the country. All the major highways specifically targeted in the GPRS I to open up the country and link it effectively with the trans-ECOWAS highway project, are to be completed. The coverage of the feeder road network, linking the rural areas to the urban centres, will continue to be increased beyond the 2005 target of 41,039 kilometres of which 35% is estimated to be in good condition. The growth rate of the construction sub-sector is expected to rise from the 8.2% of 2006.

2. Modernized agriculture based on rural development: This policy objective is related to rural transformation, land reform, increased land under irrigation, increased mechanization, value addition to traditional crops such as cocoa, expanding cash crop production and strengthening support to the private sector.

These policies are to be guided by the Maputo Declaration[3] principles , which among others requires targeting of the poor in appropriate aspects of policy and implementation; pursuit of regional balance in agricultural development, building on regional comparative advantage; the design of all policies and programmes from a gender perspective to enable government work towards greater gender equality in the agricultural sector; investments in the sector to be scientifically based and environmentally sustainable and considered on the basis of economic feasibility and social viability/sustainability; pursuit of inter-sectoral collaboration in the implementation of policies and programmes; an enabling environment for the provision of key infrastructure (irrigation, roads, storage, and energy) and information, by the private sector to be fostered by government and where necessary government to provide such infrastructure; all sector policies and plans to be subjected to Strategic Environmental Assessment (SEA) and all projects to Environmental Impact Assessment (EIA).

FASDEP II states that the following policy principles will be espoused:

- Transport planning will be fully integrated with development planning and service provision;
- Transport infrastructure investments will be targeted to better serve population, production and tourist centres aiming to reduce overall transport costs to the government and users; and
- A bulk goods transportation strategy will be developed based on specific user needs, identifying critical investments in the rehabilitation of railways and inland waterways infrastructure.

### (vii) National Employment Policy

The National Employment Policy (2008) which an efficient and effective transportation will enhance, seeks to:

[3] Maputo Declaration: Together Shaping Our Future - 4th Summit of ACP Heads of State and Government: Maputo, Mozambique 23 and 24 June 2004, ACP/28/010/04 [Final], Maputo, 24 June 2004

- Promote the goal of full employment in national economic and social policy, and to enable all men and women who are available and willing to work, to attain secured and sustainable livelihood through full productive and freely chosen employment and work;

- Secure improvement in the productivity of the labour force to improve private sector competitiveness and enhance employability to the extent that labour is afforded quality and well-remunerated employment consistent with productivity;

- Provide the fullest possible opportunity to each worker to qualify for, and to use his/her skills and endowments in a job for which he/she is well suited, irrespective of race, sex, religion, political opinion, national extraction, ethnic or social origin;

- Safeguard the basic rights and interests of workers, and to that end, promote respect for relevant International Labour Standards, including those on Forced Labour, Freedom of Association, the Right to Organise and Bargain Collectively, the Principle of Non-Discrimination and Equality of Treatment and Opportunities and elimination of the most extreme forms of Child Labour;

- Secure maximum cooperation from, and participation by, the Ghana Employers Association (GEA), the Trades Union Congress and other interested parties in decisions relating to national employment policy, so as to ensure industrial peace and harmony and minimise productivity and job losses through industrial unrest; and

- Stimulate economic growth and development, eradicate poverty and improve the standards of living by minimising the rates of unemployment and underemployment, and optimising the utilisation of labour and human resources.

### 5.1.2 National Legislation

The EPA Act, 1994 (Act 490) established the Environmental Protection Agency. It is the framework legislation from which subsequent environmental laws are currently derived. The Act stipulates the functions of the EPA as:

- Environmental regulation: ‘to prescribe standards and guidelines relating to the pollution of air, water, land and other forms of environmental pollution including the discharge of wastes and the control of toxic substances’;

- Legal compliance: ‘to ensure compliance with any laid down environmental impact assessment procedures in the planning and the execution of development projects, including compliance in respect of existing projects’;

- Effective partnership: ‘to act in liaison and co-operation with government agencies, District Assemblies and other bodies and institutions to control pollution and generally protect the environment’;

- Environmental management: ‘to promote effective planning in the management of the environment’;

- Training and Capacity building: ’to conduct seminars and training programmes and gather and publish reports and information relating to the environment’;

- Revenue generation: 'to impose and collect environmental protection levies in accordance with this Act or regulations made under this Act'.

However, until very recent times (i.e. post GPRS 2003) the main economic sectors such as Transport, Energy, Mining, Tourism, etc, have not had broad national level policies to effectively address environmental concerns directly within their sectors. In the absence of such policies, environmental considerations have been generally managed through various legal instruments such acts of incorporation of the relevant organisations.

In addition to the EPA law noted above, there are a number of legal provisions that deal with the specific aspects of the broad national environmental policy objectives within the sectors. Among those that cover objectives relevant to the provision of transport infrastructure, facilities and services include:

- Forestry Commission Act, 1999 (Act 571);
- The Administration of Lands Act, 1962 (Act 123);
- State Lands Act, 1962 (Act 125);
- State Lands Regulations 1962 (LI 230);
- State Lands (Amendment) (No. 2) Regulations 1963 (LI 285);
- Lands (Statutory Way Leaves) Act, 1963 (Act 186);
- Office of the Administrator of Stool Lands Act, 1994 (Act 481);
- Water Resources Commission Act, 1996 (Act 522);
- National Development Planning Act, 1994 (Act 479);
- Ghana Ports and Harbours Authority Law, 1986 (PNDC Law 160);
- Ghana Maritime Authority Act, 2002 (Act 630);
- Ghana Shipping Act, 2003 (Act 645);
- Port Regulations, 1964 (LI 352);
- Ghana Free Zones Act (Act 504);
- Labour Act, 2003 (Act 651);
- Children's Act, 1998 (Act 560);
- Human Trafficking Act, 2005;
- Ghana AIDS Commission Act, 2002 (Act 613);
- Commission on Human Rights and Administrative Justice Act, 1993 (Act 456)

- National Vocational Training Act, 1970 (Act 351).

### 5.1.3 Transport Sector EA Guidelines

Following from nearly two decades of implementation of environmental impact assessment in Ghana, the EPA in partnership with other key stakeholders has drawn up sector-specific environmental assessment guidelines for the major development sectors such as energy, transport, agriculture, health, tourism etc. These guidelines identify the issues of environmental concern that are relevant to these sectors.

While the guidelines do not mention specific objectives these may be derived from the issues of environmental concern as identified under the different transport modes used in Ghana – road, rail, aviation and maritime (including inland water transport).

Provision of major transport infrastructure for all modes (roads, rail tracks, airports and sea ports and harbours) raise concerns related to land such as land/soil degradation, destruction of habitats, loss of productive land and resettlement and compensation issues.

In operation, the various transport modes pose concerns such as emissions to air, noise and vibration, spillage of oil/chemicals, threats to public health and safety etc.

### 5.1.4 Environmental and Social Management Framework

The Environmental and Social Management Framework for the Transport Sector Development Plan (ESMF) was developed in 2007 by the Ministry of Roads and Highways (MORH) to ensure that the implementation of the TSDP conforms to the requirements of the EPA as well as the World Bank's Environmental and Social Safeguards, ie. Environmental Assessment (OP 4.01), Involuntary Resettlement (OP/BP 4.12), Forestry (OP/BP 4.36), and Management of Cultural Property (OP 11.03).

While the TSDP covers projects and services for all transport modes, the ESMF focuses mainly on the road sub-sector. The ESMF identifies a wide range of environmental and social issues arising from road transport including HIV/AIDS along transport corridors and provides guidelines for mitigation in each case.

### 5.1.5 Resettlement Policy Framework

In order to deal comprehensively with the issues of resettlement and compensation arising from provision of transport infrastructure, in 2007 the MORH developed the Road Sector Resettlement Policy Framework (RPF) to guide the process of dealing with project affected persons. The RPF closely follows the World Bank's safeguard policy on involuntary resettlement OP/BP 4.12 and conforms to the requirements of Ghana's constitution in matters of compensation for land acquisition for development projects. The emphasis is therefore on the need to avoid resettlement where feasible (or minimise it through the identification of alternatives), to provide fair and prompt compensation, to implement the resettlement plan as a development programme, and to have a transparent public disclosure and consultation process.

## 5.2 International Level Objectives

Ghana is a signatory to over 40 international conventions, treaties and protocols related to various aspects of the environment.

A number of these have specific relevance to the provision of transport infrastructure, facilities and services. These include:

- Convention on Wetlands of International Importance Especially as Waterfowl Habitat, Ramsar, 1971;
- Convention Concerning the Protection of Workers against Occupational Hazards in the Working Environment Due to Air pollution, Noise and Vibration, Geneva, 1977;
- Convention on Biological Diversity, Rio de Janeiro, 1992;
- International Convention for the Prevention of Pollution from Ships and Protocol (MARPOL 73/78);
- United Nations Framework Convention on Climate Change, New York, 1992, and its Kyoto Protocol, 1997;
- The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, Basel, 1989;
- International Covenant on Economic, Social and Cultural Rights (CESCR), 1966;
- Convention on the Elimination of All Forms of Discrimination against Women (CEDAW), 1979;
- Convention on the Rights of the Child. 1989 (New York, USA).

# 6 SEA Objectives

## 6.1 SEA Objectives

During the Scoping Workshop held on 30th June 2009, stakeholders were asked to identify and prioritise environmental sustainability (natural resources or bio-physical, socio-cultural, economic and institutional) issues and desirable outcomes with regard to the integrated transport planning process and plan. These criteria have been translated into specific objectives in order to focus the SEA of the ITP.

The overall objective of this SEA is to ensure that environmental issues are integrated into the Integrated Transport Plan. The specific objectives of the SEA are to ensure that transport infrastructure, facilities and services, and other related activities, emanating from the integrated transport plan will:

i. Minimise emission of pollutants to air including exhaust from all forms of transportation, greenhouse gases, foul odours and dust, etc;

ii. Avoid degradation of land and soils including depletion of nutrients, adverse change of soil structure or soil pollution;

iii. Minimise loss of biodiversity, and manage with due respect to the natural character of ecosystems and overall ecosystem functions so that habitats for faunal and floral species are preserved and conserved. This applies to terrestrial, avian and ecosystems, including wetlands;

iv. Avoid discharges, disposal of waste or other loads on the environment that deteriorate the quality of ground and surface water resources;

v. Contribute to improving health and reducing health and safety risks especially road, rail, and boat accidents;

vi. Handle issues related to relocation and involuntary resettlement in accordance with the approved involuntary resettlement and compensation framework, and consistent with the constitutional requirements;

vii. Provide adequate transportation access to basic social and technical services for the whole population, and in this respect address the needs of men, women, children and the vulnerable and physically challenged;

viii. Avoid creating conditions that promote the spread of STD/HIV/AIDS and other public health risks;

ix. Support growth objectives of the economy including agriculture, industry, tourism and other sectors and the attainment of related MDGs. This would, among other criteria, require appropriate arrangements for investments in the transportation sector for the benefit of all sectors;

x. Increase possibilities of employment of local people, in particular women and youth, and enhance opportunities for investment to stimulate growth of local economies;

xi. Promote poverty reduction in support of national development objectives;

xii. Respect the basic tenets of good governance including equity in access, principles of democracy, respect for human rights, participation, transparency and accountability;

xiii. Promote inter and cross-sectoral institutional collaboration within clearly defined roles and mandates;

xiv. Promote measures aimed at strengthening related institutions and building capacity including training, providing logistics and systems for integrated transport planning, implementation and management;

xv. Attract private sector participation in the provision of transportation infrastructure, facilities and services and make provisions for protecting investments.

## 6.2 Baseline Data

### 6.2.1 Data Sources

Following the identification of objectives, data sources for each of the sustainability criteria have been identified. Table 6-1 below shows the prioritised sustainability criteria and relevant data sources.

**Table 6-1: Data Sources for Prioritised Sustainability Criteria**

| Pillars of Sustainability | Concerns/desired aims | Overall Ranking | Data Sources |
|---|---|---|---|
| Natural Resources or Bio-physical | Air quality | 1 | EPA |
| | Land degradation | 2 | State of the Environment Report 2004<br>Ministry of Lands and Mineral Resources |
| | Loss of biodiversity (implies loss of habitat, flora and fauna) | 3 | Forestry Commission – Wildlife Division<br>State of Environment Report 2004 |
| | Water quality | 3 | Water Resources Commission<br>State of Environment Report 2004 |
| Social and Cultural | Transportation safety | 1 | Road Safety Commission<br>Ghana Maritime Authority<br>Ghana Railways Corporation<br>Ghana Civil Aviation Authority<br>Bulk Oil Storage and Transport Company (BOST) |
| | Relocation and involuntary resettlement | 2 | Land Valuation Board |
| | Accessibility by ALL to basic social and technical services through transportation | 3 | Ghana Living Standards Survey (GLSS) |
| | Public health, including STD/HIV/AIDS, noise, air quality | 3 | GLSS<br>Ghana AIDS Commission<br>Ministry of Health/Ghana Health Service |
| Economic | Economic growth and stability | 1 | MOFEP |
| | Job creation and income generation through investment | 2 | Ministry of Employment and Labour – Department of Labour |
| | Poverty reduction | 3 | NDPC<br>Ghana Statistical Service (GSS)<br>GLSS |
| Institutional | Good governance | 1 | MOFEP |

| Pillars of Sustainability | Concerns/desired aims | Overall Ranking | Data Sources |
|---|---|---|---|
| | | | NDPC |
| | Inter/cross sectoral institutional collaboration and coordination roles and mandates | 2 | Transport Sector institutions |
| | Institutional strengthening and capacity building | 2 | Transport Sector institutions<br>Institutional Study of the Transport Sector |
| | Private sector participation and protection of investment | 3 | Transport Sector institutions |

During the Analysis Phase, the availability and type of data for each concern or desired aim will be determined, following which indicators will be refined, and specific targets set where appropriate.

### 6.2.2 Baseline Mapping

As part of a preliminary data gathering exercise, digitised maps showing the existing major environmental factors in relation to road, rail, inland waterways and aviation infrastructure have been prepared. Features depicted in the maps include:

- Forests, national parks and protected areas;
- Rainfall distribution;
- Ecological zones;
- Land use patterns;
- Water resources;
- Population density distribution;
- Rail, road, inland waterway networks, and airports and airfields.

Initial observations indicate that transport infrastructure is concentrated in the central and southern parts of Ghana. The network does not extend to the high potential areas in Eastern Region towards the Afram Plains, nor to the medium potential areas in the eastern / south-eastern parts of Northern Region.

The rail network serves only a small section of the country, and apart from the mining and cocoa production areas, does not serve other areas with high to medium agricultural potential.

The maps confirm that the transition zone from Brong Ahafo Region to the north and the eastern corridor towards the Afram Plains and beyond are inadequately served by transport, and this therefore limits economic growth. The maps also confirm the phenomenon of the population pull to the south and southwest because of the economic activities existing there, which has led to unsustainable urban growth and propagation of poverty (eg. because of the in-migrants involvement in activities such as hawking, head porterage, etc).

The ITP needs to therefore address the broad objectives of the GPRS II by strategically linking the rural and urban production centres.

The digitised maps are presented in Appendix D.

In the Analysis Phase, the plan options proposed in the Draft Integrated Transport Plan will be overlain onto the baseline sheets in order to visualise and predict potential impacts. In the Final SEA Report, the Final Integrated Transport Plan will be overlain onto the various environmental and social/economic factors, to illustrate generally the types of impacts that may occur from the new plan.

## 6.3 Indicators and Targets

At this stage, based on priority sustainability criteria, we have made a preliminary selection of possible indicators. Once the type of data has been confirmed, we will be able to determine the indicators that can easily be monitored by the responsible agencies, and set targets for achieving objectives. These are shown in Table 6-2 below.

**Table 6-2: Environmental Sustainability Criteria and Aspects**

| Pillars of Sustainability | Concerns | Aspect | Possible Indicators |
|---|---|---|---|
| **Natural Resources or Bio-physical** | Air quality | Emissions of greenhouse gases<br>Emissions of particulates (PM10) | Changes in CO2 levels<br>Changes in PM10 levels<br>Changes in NOx levels |
| | Land degradation | Land degradation from acquiring materials used for transport infrastructure (borrow pits, quarries) | No. of rehabilitated borrow pits<br>No. of rehabilitated quarries |
| | Loss of biodiversity / Loss of habitat (of flora and fauna) | Effects on sensitive areas | Change in number of plant species<br>Change in number of animal species |
| | Water quality | Sediment loading in water bodies | Changes in suspended solids levels in selected water bodies |
| **Social and Cultural** | Transportation safety | Road Accidents<br>Boat Disasters<br>Derailments | No. of road accidents<br>No. of boat disasters<br>No. of derailments |
| | Relocation and involuntary resettlement | Land take and acquisition / destruction of assets | No. of PAPs<br>Land area acquired for transportation projects<br>Total compensation payments |
| | Accessibility by ALL to basic social and technical | Access to schools, health facilities, markets | Time taken to reach schools, health facilities, |

| Pillars of Sustainability | Concerns | Aspect | Possible Indicators |
|---|---|---|---|
| | services through transportation | | markets and administration centres |
| | Public health, including STD/HIV/AIDS, noise, air quality | Spread of disease | Change in STD/HIV/AIDS prevalence rate<br>Change in incidence of TB |
| **Economic** | Economic growth and stability | GDP | Change in GDP |
| | Job creation and income generation through investment | Transport related jobs<br>Investments facilitated by improved transport | No. of jobs created by ITP projects<br>No. of new investments due to improved access |
| | Poverty reduction | Access to wealth | Change in per capita income levels<br>Change in per capita expenditure levels |
| **Institutional** | Good governance | Participation, Transparency and Accessibility | No. of meetings / consultations for transport sector programmes per year having broad participation |
| | Institutional strengthening and capacity building | GoG budgetary allocation and manpower resources | % Change in budgetary allocation to transport sector agencies |
| | Inter/cross sectoral institutional collaboration and coordination roles and mandates | Effective integration and improved coordination within Transport sector | No. of collaborative meetings held for Transport Sector, programmes per year |
| | Private sector participation and protection of investment | Facilitation of local private sector participation in transport projects and services | % Change in local private sector participation in transport sector projects and services |

## 6.4 Compatibility of ITP Project Evaluation Criteria and SEA Sustainability Criteria

As part of the transport planning process, the ITP Consultant compiled a Multi Criteria Evaluation Manual which is to be applied for the selection of priority projects. While the transport model will develop a number of supply scenarios consisting of a set of projects, the project evaluation criteria as described in the MCEM will prioritise the projects making up a particular scenario in terms of economic viability, environmental effects, social effects, strategic access, inter/intra-modal integration and local access.

In this section, some general comments have been made on the project evaluation criteria developed in the MCEM, and in addition the prioritised environmental sustainability criteria are compared with project evaluation criteria as described in the MCEM.

### 6.4.1 General Comments on the Project Evaluation Criteria

As mentioned above, the project evaluation criteria described in the MCEM comprise six (6) factors, namely: economic viability, environmental effects, social effects, strategic access, inter/intra-modal integration and local access. In weighting, the various criteria proposed as part of the evaluation process are not applied in all cases to each of the modes. Table 6-3 below notes those factors to be applied by mode.

**Table 6-3: Weighting Allocated to Project Evaluation Criteria**

| Sector | Economic Viability | Environmental Effects | Social Effects | Strategic Access | Inter/Intra Modal Integration | Local Access |
|---|---|---|---|---|---|---|
| Road | 50% | 10% | 10% | 10% | 10% | 10% |
| Railways | 50% | 15% | 15% | 10% | 10% | |
| Ports | 60% | 20% | 20% | | | |
| Aviation | | 30% | 30% | 20% | | 20% |

*Source: EGIS BCEOM, Multi-Criteria Evaluation Manual, 1st Draft, March 2009.*

The table shows that in the evaluation process:

i. Local access has not been considered for railways;

ii. Strategic access, inter/intra modal integration and local access have not been considered for ports;

iii. Economic viability and inter/intra modal integration have not been considered for aviation;

iv. Inland waterways (which provide local access) and pipelines have not been included.

The reason for allocating different weights to different modes for the same criteria is also not clear.

### 6.4.2 Analysis of Sustainability Criteria

In this section, each of the identified sustainability criteria have been compared with the project evaluation criteria.

#### (i) Environmental Sustainability Criteria

A comparison of environmental sustainability criteria is presented in Table 6-4 below.

**Table 6-4: Compatibility of Environmental Sustainability and Project Evaluation Criteria**

| SEA OBJECTIVES | | ITP EVALUATION CRITERIA | | | | |
|---|---|---|---|---|---|---|
| **Pillars of Sustainability** | **Concerns and Desired Outputs (Aims)** | **Proximity to ESAs** | **Water Quality** | **Noise (Airports and Ports)** | **Impact on Ecological Zones** | **Environmental Impact Potential** |
| Natural Resources or Bio-physical | Air quality | ✔ | O | O | ✔ | ✔ |
| | Land degradation | ✔ | ✔ | O | ✔ | ✔ |
| | Loss of biodiversity (implies loss of habitat, flora and fauna) | ✔ | ✔ | ✔ | ✔ | ✔ |
| | Water quality | ✔ | ✔ ✔ | O | ✔ | ✔ |

Legend

✔ Criteria are mutually supportive
✔ ✔ Criteria are strongly supportive
**O** No direct relationship between the criteria
**X** Criteria are not compatible
**?** Unknown / not determined

**Observations and Comments**

- There is general concurrence between SEA environmental criteria and environmental evaluation criteria used in the MCEM.
- Water quality conforms to SEA and ITP MCEM objectives, and its significance is cross-modal.
- Air quality was identified as being the highest concern amongst the stakeholders, but this has not been included as an environmental evaluation criterion in the MCEM. In the discussion on the economic evaluation of rail projects reference is made to the economic benefits of reduction in air pollution and greenhouse gas emissions in Section 9.2.5.3 of the MCEM, but it is not clear whether air quality and greenhouse gas emissions have been included in the model for economic evaluation. Furthermore, air quality is only considered in terms of road and rail transport, and not other modes of transport, and as an economic cost, but it should be included as an environmental criterion for evaluation.
- Land degradation and biodiversity / habitat loss as sustainability criteria are embedded in the evaluation criteria related to environmentally sensitive areas, the ecological zones and to some extent the environmental impact potential.
- Noise has been limited to airports and ports projects, but this should apply across all the transport modes. Noise also adversely affects faunal species (including marine fauna).

### (ii) Social and Cultural Sustainability Criteria

Social and cultural sustainability criteria are compared in Table 6-5 below.

**Table 6-5: Compatibility of Social and Cultural Sustainability and Project Evaluation Criteria**

| SEA OBJECTIVES | | ITP EVALUATION CRITERIA | | | |
|---|---|---|---|---|---|
| **Pillars of Sustainability** | **Concerns and Desired Outputs (Aims)** | **Poverty Reduction** | **Travel Safety** | **Involuntary Resettlement** | **Destruction of Cultural Heritage** |
| Social and Cultural | Transportation safety | ? | ✔ ✔ | O | O |
| | Relocation and involuntary resettlement | ✔ | O | ✔ ✔ | ✔ |
| | Accessibility by ALL to basic social and technical services through transportation | ✔ | O | O | O |
| | Public health, including STD/HIV/AIDS, noise, air quality | O | O | O | O |

Legend

✔ Criteria are mutually supportive
✔ ✔ Criteria are strongly supportive
O No direct relationship between the criteria
X Criteria are not compatible
? Unknown / not determined

**Observations and Comments**

- Transport/travel safety, relocation and involuntary resettlement are mutually compatible. However, travel safety has only been included under road transport, but should have been included for all modes as it is applicable to all modes.

- The influence of transport/travel safety and public health on poverty reduction is not implied in the MCEM descriptions.

- Accessibility by all to basic social and technical services through transportation is not reflected as a social criterion, but it is included under more specific criteria for strategic and local access, which is a strong sustainability factor.

- Destruction of cultural heritage is related to relocation and resettlement, especially where immovable cultural assets, such as graves, shrines, ruins, groves are encountered.

- Effects of noise have been included under environmental effects and air quality under economic benefits, but these also need to be considered in terms of their social effects. Noise is mentioned in the MCEM under the ports and airports as “one of the most undesirable nuisances caused by transport and is considered a public health issue”, but it is not included as a social criterion for evaluation (refer Sections 10.3.1.2 and 11.3.1.3 of the MCEM).

- Public health, especially the spread of HIV/AIDS, is one of the most important social issues related to all forms of transportation, and prioritised by stakeholders, but has not been referred to at all.

### (iii) Economic Sustainability Criteria

Table 6-6 presents a comparison of economic sustainability criteria.

**Table 6-6: Compatibility of Economic Sustainability and Project Evaluation Criteria**

| SEA OBJECTIVES | | ITP EVALUATION CRITERIA | | | |
|---|---|---|---|---|---|
| **Pillars of Sustainability** | **Concerns and Desired Outputs** | **Net Present Value** | **Internal Rate of Return** | **Cost Benefit Analysis** | **Poverty Reduction** |
| Economic | Economic growth and stability | ✔ | ✔ | ✔ | ✔ ✔ |
| | Job creation and income generation through investment | O | O | ✔ | ✔ ✔ |
| | Poverty reduction | O | O | ✔ | ✔ ✔ |

Legend

✔ Criteria are mutually supportive
✔ ✔ Criteria are strongly supportive
**O** No direct relationship between the criteria
**X** Criteria are not compatible
**?** Unknown / not determined

**Observations and Comments**

- Poverty reduction is the main rationale for evaluating social criteria in the MCEM. It also forms, together with job creation, part of the economic viability evaluation in the cost-benefit analysis.

- There is a pre-supposition that economic growth and stability influence favourable NPV and IRR, and reaffirms the sustainability of the projects.

### (iv) Institutional Sustainability Criteria

The project evaluation criteria has not taken into account institutional criteria, since understandably these relate more to factors necessary for effective implementation (i.e. enabling environment), and will go a long way to assuring the sustainability of the plan. Institutional criteria recommended by the stakeholders are as follows:

1. Good governance;

2. Inter/cross sectoral institutional collaboration and coordination roles and mandates;

3. Institutional strengthening and capacity building;

4. Private sector participation and protection of investment.

These should be given priority in the ITP process and in proposals for policy, governance and institutional frameworks that they will recommend.

# 7 Institutional Analysis

This section presents an analysis of the institutional issues related to environmental sustainability in Ghana and more specifically within the agencies responsible for the implementation of the ITP.

The term "institutions" as used within the context of this SEA and in other similar applications represents both the organisations (i.e. structures, resources, personnel), as well as the systems and procedures of operation (i.e. legislation, mandates, policies, strategies etc.), which influence and control their functions.

Some of the main issues considered at this stage were first identified in the Inception Report of the SEA of the ITP, delivered in March 2009.

## 7.1 Environmental Management and Governance Systems in Ghana

### 7.1.1 Legal Framework

The 1992 Constitution of the 4th Republic, which came into force on 7th January 1993, is the fundamental law of Ghana and provides the foundation on which all other laws stand.

Within the directive principles of State policy, the Constitution has a provision on Environmental protection and management which states in Article 36(9) that: "The State shall take appropriate measures needed to protect and safeguard the national environment for posterity; and shall seek co-operation with other states and bodies for purposes of protecting the wider international environment for mankind".

This constitutes the basis on which Government initiates policy actions and legislation to promote sound environmental protection and management.

Prior to the 1992 Constitution, the formal considerations of environmental protection and management in Ghana began with the establishment of the Environmental Protection Council (EPC) in 1974 following the 1972 Stockholm UN Conference on the Human Environment. Among the main functions of the EPC was the mandate "to ensure the observance of proper safeguards in the planning and execution of all development projects including those already in existence that are likely to interfere with the quality of the environment."

In 1989, the EPC developed draft Environmental Impact Assessment (EIA) guidelines and development activities expected to have significant environmental impacts were required to obtain appropriate clearance from EPC. The National Environmental Policy was adopted in 1991, and its goal is to ensure a 'preventive approach' to sound management of the environment and the avoidance of exploitation of resources in ways that may result in irreparable damage to the environment. The policy makes provision for, among others, guidance for healthy environmental practices in the national development effort and integration of environmental considerations in sectoral, structural and socio-economic planning at all levels.

In tandem with the NEP, the National Environmental Action Plan (NEAP) identified specific actions to be carried out to protect the environment and ensure better management of natural resources. NEAP dealt with sustainable development issues as defined by the World Commission on Environment and Development in 1987 and provides a broad framework for the integration of environmental issues into development strategies and actions.

NEAP led to the enactment of the Environmental Protection Agency (EPA) Act 1994, Act 490, which transformed the EPC from an advisory to a regulatory body with the required capacity to lead environmental management in the country. It promoted inter-agency coordination, support to District Assemblies, involvement of community groups and NGOs in environmental management.

EPA published EIA Procedures in June 1995 which laid out both the administrative and process issues required for smooth implementation of the EIA process in Ghana. At the same time EPA provided training and capacity building for local consultants to support proponents in complying with the environmental assessment system. In 1999, the Environmental Assessment Regulations, 1999, (LI 1652) was passed into law. The regulations prohibit commencing an "undertaking" without prior registration and environmental permit, and define the relevant stages of the procedures for Environmental Assessment. The practice of SEA has evolved under the application of these regulations and initial guidelines for minimum requirements for SEA in Ghana have recently been issued in May 2009 as an output of the SEA Review carried out from 2008.

### 7.1.2 Institutional Arrangements for Environmental Management

The EPA is organised around seven (7) main divisions:

i. Field Operations;

ii. Chemicals Control and Management;

iii. Information Education and Communication;

iv. Environmental Compliance and Enforcement;

v. Inter-sectoral Division;

vi. Finance Division;

vii. Administration Division.

These divisions are further sub-divided into departments. Environmental Assessment is the function of the Environmental Assessment and Audit Department under the Environmental Compliance and Enforcement Division. The EAA Department deals with environmental impact assessment (EIA), environmental audits, monitoring and evaluation and environmental economics. The Environmental Compliance and Enforcement Division is responsible for ensuring that effective environmental management practices are applied across all sectors.

The Agency is vested with the power to determine what constitutes an "adverse effect on the environment" or an activity posing "a serious threat to the environment or public health", and also to regulate and serve an Enforcement Notice for any offending or non-complying undertaking, including transport sector undertakings. Where there is a requirement by EPA for an EA for an undertaking, it overrides any authorizing MDA from licensing, permitting, approving or consenting such undertaking, unless notified otherwise by the EPA.

The environmental management system therefore functions effectively on institutional collaboration and linkages between EPA and the various Ministries, Departments and Agencies at the National, Regional and District levels as well as NGOs and Development Partners.

From the commencement of the SEA of GPRS, EPA has set up a unit responsible for SEA under the Office of the Executive Director to coordinate the implementation of SEA.

### 7.1.3 Implementation of Environmental Management in Ghana's Transport Sector

Ghana's Transport sector comprises of the following modes, all of which are under consideration in this SEA:

- Road;
- Rail;
- Maritime and Inland Water;
- Aviation;
- Pipelines.

Among the transport sector agencies and organisations, the Ghana Highway Authority (GHA) and the Ghana Ports and Harbours Authority (GPHA) have fully developed Environmental Units dealing with environmental management issues on regular basis.

The pursuit of sustainable development in Ghana has led to NDPC's requirement, in the GPRS II 2006-2009, that all public policies and programmes should be subjected to SEA. In this regard the Ministry of Roads and Highways has led the way with the SEA of the National Transport Policy and the Environmental and Social Management Framework of the TSDP.

The GHA has also conducted the Sectoral Environmental Assessment for General Maintenance for Trunk Roads with support from DANIDA which has effectively integrated environmental management into highway maintenance systems. The Department of Urban Roads (DUR) is currently conducting the SEA of the Urban Transport Project to ensure that it meets environmental sustainability objectives.

In the maritime sub-sector GPHA has carried out an SEA of its Port Development Plan which is currently under implementation and for which the various projects have been subjected to EIA. To date no other SEAs have been carried out in the other agencies.

The report of the SEA of the Transport Policy published in June 2007 proposed a number of recommendations which are intended to enhance environmental management within the transport sector. These recommendations include:

- The need to provide for effective integrated approach to addressing environmental issues within the sector. This requires defining clear-cut policy objectives on environmental management and ensuring adequate budgetary support for dealing with environmental issues.

- The requirement to mainstream environment across all the policy goals of the Transport Policy so as to ensure that environmental issues are institutionalized and managed in an integrated and sustainable manner.

- Integrating transport and land use planning so as to mitigate the effects of noise and air pollution on sensitive receptors such as schools, hospitals, etc.

## 7.2 Capacity of Key Institutions Responsible for Environmental Sustainability Issues

The priority environmental sustainability issues for the ITP as identified during this Scoping Phase are shown in Table 7-1 below with the key responsible agencies responsible for the relevant natural/bio-physical and socio-cultural criteria. For the economic and institutional criteria, a multi-sectoral approach will be necessary, where a number of sector MDAs will have to work together.

**Table 7-1: Priority Environmental Sustainability Issues for the ITP**

| Pillars of Sustainability | Concerns/desired aims | Key Responsible Organisations |
|---|---|---|
| Natural Resources or Bio-physical | Air quality | EPA |
| | Land degradation | EPA<br>Forestry Commission |
| | Loss of biodiversity (implies loss of habitat, flora and fauna) | EPA<br>Forestry Commission |
| | Water quality | EPA<br>Water Resources Commission |
| Social and Cultural | Transportation safety | Transport Sector Organisations |
| | Relocation and involuntary resettlement | *MS |
| | Accessibility by ALL to basic social and technical services through transportation | *MS |
| | Public health, including STD/HIV/AIDS, noise, air quality | Ghana Health Service<br>Ghana Aids Commission<br>EPA |
| Economic | Economic growth and stability | *MS |
| | Job creation and income generation through investment | *MS |
| | Poverty reduction | *MS |
| Institutional | Good governance | *MS |
| | Inter/cross sectoral institutional collaboration and coordination roles and mandates | *MS |
| | Institutional strengthening and capacity building | *MS |
| | Private sector participation and protection of investment | *MS |

*MS – Multi-Sectoral; outcomes determined by a number of organisations working together

The organisations considered here are:

i. EPA;

ii. Forestry Commission;

iii. Water Resources Commission;

iv. Transport Sector organisations.

### 7.2.1 Environmental Protection Agency

EPA is responsible for issues related to air quality, water quality, noise, land degradation and bio-diversity and loss of habitats, and their monitoring. The Environmental Quality Department provides guidelines and quality standards for the regulation of emissions to air, discharge of effluents into receiving media and noise levels in various classes of human settlements.

These standards and guidelines are monitored and enforced through the field operations department and the legal department provides support in situations where recalcitrant culprits are prosecuted in court.

Quality of vehicular emissions are not yet regulated by law in Ghana (cases of excessive smoke emission from vehicles are treated as public nuisance and the Police are empowered to intervene). EPA is currently supporting the Drivers and Vehicles Licensing Authority (DVLA) in a pilot programme to monitor emissions from vehicles in Accra. It is expected that in due course appropriate regulatory instruments would be introduced for the control of vehicular exhaust emissions.

EPA's responsibility for issues related to land degradation and bio-diversity is exercised through the various environmental management processes such as EIA, preliminary environmental reports, environmental management plans, etc. EPA has offices in all the administrative regions in Ghana which carry out monitoring to ensure compliance with the relevant permit conditions.

Furthermore, EPA is also the designated authority of Ghana's National Oil Spill Contingency Plan (NOSCP). EPA is responsible for the management of the environment, including oil spill preparedness, response and cooperation. The EPA coordinates the development and maintenance of a national capability to respond to accidents at sea, on land, inland waterways or in connection with oil pipeline, storage, transport facilities and installations which have caused or are likely to cause any kind of oil pollution. Particularly, the EPA, as the Pollution Executive Body, is, in the event of a spill, required to convene National Reporting Centre, which will receive all reports of oil spill incidents or any observed pollution inside the geographical coverage of this plan. A National Oil Spill Authority is to be established which shall take responsibility for the operational response to all oil spill incidents, which have caused or are likely to cause any kind of oil pollution or to any observed pollution.

A National Contingency Plan to deal with such events or incidents has been developed. The plan covers the land territory, including the coastline of the Republic of Ghana and the areas and waters as defined in the Maritime zones law and the Territorial Seas Act. The area of responsibility of the NOSCP for Ghana includes the area offshore within the 200-nautical mile Exclusive Economic zone and all the area within the interior boundaries of the country. It is also responsible for addressing oil spills emanating from across the national borders.

### 7.2.2 Forestry Commission

The two (2) principal agencies of relevance in the context of this SEA are the Forest Services Division (FSD) and the Wildlife Division (WD). FSD is responsible for the conservation of the various forests and forest resources spread all over the country. They provide regulations and procedures to guide the implementation of projects which may impact on these resources to ensure that activities are carried out in a sustainable manner. They work closely with EPA in providing support during the EA phase of the projects and subsequent follow-up during implementation.

Similarly the WD has responsibility for all the wildlife resources including Ramsar sites and other wetlands, bird sanctuaries, coastal resources etc. They also work with EPA to ensure that the various sensitive areas and protected areas are not adversely impacted by projects.

In terms of capacity, both organisations are legally empowered by their acts of establishment to be able to enact and enforce various regulations to conserve and protect the resources under their control. However they face challenges related to budgetary constraints which limit their ability to effectively deploy adequate staff to monitor all the various acts of encroachment and violations that occur during implementation of projects.

### 7.2.3 Water Resources Commission

The Water Resources Commission (WRC) was established to facilitate the coordination and harmonization of water resource management in Ghana. Specifically, the objectives of the WRC are to:

- Propose comprehensive plans for the utilization, conservation, development and improvement of water resources;
- Initiate, control and coordinate activities connected with the development and utilization of water resources;
- Grant water rights;
- Collect, collate, store and disseminate data or information on water resources in Ghana;
- Require water user agencies to undertake scientific investigations , experiments or research into water resources in Ghana;
- Monitor and evaluate programmes for the operation and maintenance of water resources;
- Advise the Government on any matter likely to have adverse effects on the water resources of Ghana;
- Advise pollution control agencies in Ghana on matters concerning the management and control of pollution of water resources; and
- Perform such other functions as are incidental to the foregoing.

Within this mandate, WRC works closely with EPA to ensure that projects do not impact adversely on water resources including water quality preservation. As with the FSD and WD, the WRC also faces capacity constraints in relation to inadequate budgetary allocation to ensure effective monitoring and control. WRC works with various communities to implement integrated water resources management initiatives to promote sustainable use of water resources.

### 7.2.4 Transport Sector Agencies

The Transport Sector agencies are responsible for initiating and implementing the programmes and projects within the Sector and are therefore responsible for ensuring compliance with the measures needed to achieve sustainability of these programmes and projects. The agencies covering the different modes are:

#### (i) Road Infrastructure Agencies

Three agencies are primarily responsible for the development and maintenance of the country's roads.

**The Ghana Highway Authority**

The Ghana Highway Authority (GHA) was established as an autonomous body responsible for planning, designing, construction, rehabilitation, maintenance and management of highway (or trunk roads) and related road works in the country.

GHA has a fully developed Environment and Safety Department headed by a Director, which is responsible for ensuring environmental issues related to their activities are adequately managed. However this capacity is only available at the head office in Accra from where they provide support to the regional offices.

**Department of Urban Roads**

The Department of Urban Roads (DUR) was established to take over the responsibilities for reconstruction, rehabilitation and maintenance of city roads in Accra, Kumasi, Sekondi/Takoradi, Tema and Tamale.

In support of the policy of decentralisation, DUR is working closely with Metropolitan, Municipal and District Assemblies to plan and implement development and maintenance programmes to meet acceptable standards in road works and traffic management in the metropolitan, municipal and district centres.

DUR has an Environmental Desk at the head office under the Directorate of Development for dealing with environmental issues arising from their activities. This capacity is limited in terms of providing support beyond the head office.

**Department of Feeder Roads**

The Department of Feeder Road (DFR) was set up with the responsibility for planning and integrating feeder road construction, rehabilitation and maintenance with trunk roads, in line with agricultural priorities in the country. In accordance with the current policy of decentralisation, DFR is working closely with District Assemblies to plan and implement development and maintenance programmes to meet acceptable standards in road works and traffic management.

DFR currently does not have a functional environment unit.

**Road Transport Services and Safety Agencies**

Road Safety, Road Traffic Enforcement, Driver Licensing and Vehicle Examination as well as the training of mechanics in the industry are administrated by the National Road Safety Commission (NRSC), the Motor Traffic and Transport Unit (MTTU) of the Ghana Police Service, and the Driver Vehicle Licensing Authority (DVLA).

The MTTU of the Ghana Police Service enforces road traffic laws and regulations.

The DVLA inspects and issues road worthiness certificates to new vehicles as well as vehicles which are already in operation. It also tests and issues licenses to drivers.

The intercity State Transport Company Ltd (STC), established by LI 681 of 1971, is a Public Private Partnership company that provides inter-regional and international road transport services for the carriage of passengers and goods. The service is complemented by the Ghana Private Transport Unions (GPRTU) and other private road transport operators.

Intra city passengers service is provided by Government agencies like the Metro Mass Transit (MMT) as well as private bus operators from the GPRTU and other private transport associations.

The Government Technical Training Centre (GTTC) develops skilled artisans for the road transport industry.

### (ii) Maritime and Lake Transport Agencies

Maritime and lake transport services are provided by five (5) public sector agencies and a joint public-private enterprise.

**Ghana Maritime Authority**

Ghana Maritime Authority (GMA) was set up by the Ghana Maritime Authority Act 2002 (Act 630) to replace the Shipping and Navigation Department. It performs regulatory functions for the industry through licensing of seafarers and vessels and the enforcement of international maritime standards and conventions. The GMA has a dedicated Directorate of Environment and Safety that oversees issues of marine pollution and safety and compliance enforcement.

**Ghana Ports and Harbours Authority**

Ghana Ports and Harbours Authority (GPHA) was established to plan, build, develop, manage, maintain, operate and control ports in Ghana. Currently it operates two deep-water ports at Tema and Takoradi, which handle all of Ghana's maritime trade. The Authority also operates fishing harbours at Tema and Sekondi.

GPHA has a functional environment unit within the department of estates and environment and is responsible for handling environmental aspects of their activities. GPHA also has a safety unit that handles all issues related to safety within the port environment. All grades of workers within the ports are trained in safety and emergency procedures as is required for such facilities.

**The Volta Lake Transport Company**

The Volta Lake Transport Company Ltd (VLTC) is a subsidiary of the Volta River Authority (VRA) and provides freight and passengers transport services between Akosombo and Buipe on the Volta Lake and cross-lake services for local traffic.

VRA also has a well developed and functional directorate of environment and sustainable development which is appropriately located at Akosombo. This unit provides VLTC with the needed support for dealing with environmental concerns. In addition operators of VLTC crafts and vessels are suitably trained in safety and emergency response and certified by the Regional Maritime University in Accra.

### (iii) Air Transport Agencies

The Ghana Civil Aviation Authority (GCAA) is responsible for safety regulations and provision of air navigation services at all of Ghana's airports.

The Ghana Airports Company Limited (GACL) was set up to plan, develop, and manage and maintain all public airports and aerodromes in the country.

Ghana International Airlines Limited is responsible for the provision of domestic and international passenger, mail and cargo transport.

All these agencies are expected to meet the high quality in both structural and operational safety standards established worldwide for the air transport industry in order to ensure overall sustainability. These agencies are focussed on safety/security, but not on other environmental issues.

### (iv) Rail Transport Agency

Ghana Railway Company Limited (GRC) is a limited liability company established to construct, operate and maintain the railway and its terminals/stations, and other facilities like level crossing, bridges, culverts, drains and other works that will ensure the efficient and effective transportation of passengers and goods by rail.

The Government of Ghana is in the process of privatising railway operations and development in Ghana. The Railway Act, 2009 (Act No. 779) has recently been passed which seeks to establish Ghana Railway Development Authority (GRDA) and to regulate railway operations in the country. The GRDA shall regulate the development and operation of railway services in Ghana in accordance with the Railway Act.

# 8 SEA Activities in the Analysis and Strategy Phases

As mentioned in Section 3.4, the SEA timelines have been altered due to changes in the ITP process timelines. In this chapter, activities proposed in the Analysis and Environmental Strategy Phases are described. A revised work programme for the SEA study is also presented.

## 8.1 Analysis Phase

During the Scoping Phase, the type of baseline data required for monitoring purposes have been identified, together with data sources, and possible indicators. In the Analysis Phase, data requirements will be refined, and an assessment will be made to ensure that measurable indicators are appropriate to ensure SEA objectives are met, or whether legal and regulatory changes are required in order that the objectives are met.

Stakeholder consultations will continue through the Analysis Phase. Apart from focus group discussions, workshops will be held to present the Draft Integrated Transport Plan to Transport Sector stakeholders. In addition, interaction with the planners will take place on a regular (weekly) basis.

During the Analysis Phase, the Draft Integrated Transport Plan will be subjected to four SEA tools, namely:

i. A compatibility analysis;

ii. An assessment of risks and opportunities presented by the Draft ITP;

iii. A sustainability test to test the overall sustainability of the ITP; and

iv. A compound matrix where the poverty dimensions of the ITP are assessed.

The compatibility analysis will be conducted of the Draft Integrated Transport Plan against the objectives of the National Transport Policy, and other national and international policies and requirements relevant to the Transport Sector. While it is expected that the ITP Consultant will also carry out this exercise, the SEA must also do it, to objectively confirm whether the ITP conforms to requirements of the NTP, or to highlight areas where there is non-conformance.

The environmental sustainability criteria highlighted by stakeholders in the Scoping Workshop will be used to identify the risks and opportunities presented by the Draft Integrated Transport Plan. As part of this exercise, the capacity of key institutions to manage these risks and opportunities will be reviewed.

The sustainability of the Draft ITP will then be tested. This is designed to give a visual and quantitative measure of the extent to which the plan is capable of providing sustainable growth and development. This exercise will be carried out at the stakeholder workshops (anticipated early February 2010) where the Draft ITP will be presented.

Finally, a compound matrix, linking poverty and transport, will be used to analyse the effects of the plan in terms of livelihoods, health and well-being, vulnerability and institutional requirements.

## 8.2 Environmental Strategy Phase

In the Environmental Strategy Phase, based on the findings from the Analysis Phase, the type and magnitude of the potential effects of the ITP will be predicted. Effects can be short term or long term, reversible, irreversible, cumulative, direct or indirect, localised or widespread.

The ability to avoid or mitigate or compensate adverse effects will be established, and measures for enhancing opportunities recommended. This will include the elaboration of support measures required for strengthening institutional and governance capacity.

Indicators developed in the Analysis Phase will feed into the development of an environmental monitoring plan during this phase of the study, and based on these indicators (the type of information available and their measurability), targets will be determined, so that sustainability criteria can be effectively monitored.

## 8.3 Revised SEA Work Programme

The development of the ITP has taken longer than anticipated. The ITP targets for outputs were constantly changing for various reasons, primarily unavailability or lack of access to data.

At the time of submission of the Inception Report in early March 2009, it was anticipated that the plan alternatives will begin to emerge around mid May 2009, assuming that responses to the reports submitted at the end of March will be reviewed during April.

In April 2009, the ITP timelines were adjusted again. The model was to be ready at the end of May, and during subsequent discussions in late May with the ITP consultant, it was implied that plan scenarios would be available by end June for presentation at the consultative workshops. However, in early June 2009, it became apparent that only provisional plan projects – not scenarios – that were not model generated would be available for discussion at the workshop convened to discuss the plan alternatives, and that plan generated projects would only be available from early August 2009.

As at the present time, the ITP Consultant will begin to run the model to generate projects in early September 2009, and expects to have a Draft Integrated Transport Plan ready in mid December 2009, provided EGIS BCEOM receives approval of a rider to extend the ITP study contract in early August. Assuming there are no further delays to the completion of the Draft ITP, stakeholder workshops to present the plan will take place in early February 2010, and the SEA Analysis Report will be submitted at the end of February 2010. The Environmental Strategy Phase will directly follow the Analysis Phase, and the Draft SEA Report is expected to be presented by end March / early April 2010. After a review period, the Final SEA Report will be submitted at the end of May 2010.

The delays experienced due to the ITP study's progress have had repercussions on the SEA in that, apart from continually changing timelines, it has impacted on availability and timing inputs of some of the key SEA team members. Our contract period which currently expires on 8th February 2010 will have to be extended, and the study budget will have to be revised accordingly. In order to accommodate these factors, the SEA study work programme has had to be readjusted. A revised work programme, based on the latest timelines provided by the ITP Consultant, is presented in Table 8-1 overleaf.

## Table 8-1: Revised SEA Work Programme

| | Activity | Month: 2009 Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | 2010 Jan | Feb | Mar | Apr | May | Jun |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **A** | **INCEPTION** | | | | | | | | | | | | | | | | | |
| A 1 | Background Review and scoping | | | | | | | | | | | | | | | | | |
| A 2 | Regulatory Framework | | | | | | | | | | | | | | | | | |
| | Review period | | | | | | | | | | | | | | | | | |
| **B** | **SCOPING** | | | | | | | | | | | | | | | | | |
| B 1 | Scoping & Baseline definition | | | | | | | | | | | | | | | | | |
| | Review period | | | | | | | | | | | | | | | | | |
| **C** | **ANALYSIS** | | | | | | | | | | | | | | | | | |
| C 1 | Baseline data | | | | | | | | | | | | | | | | | |
| C 2 | Environmental problems | | | | | | | | | | | | | | | | | |
| C 3 | Selection of future scenarios | | | | | | | | | | | | | | | | | |
| C 4 | Evaluation of scenario options | | | | | | | | | | | | | | | | | |
| C 5 | Assessment of potential mitigation | | | | | | | | | | | | | | | | | |
| | Review period | | | | | | | | | | | | | | | | | |
| **D** | **ENVIRONMENTAL STRATEGY** | | | | | | | | | | | | | | | | | |
| D 1 | Recommendations | | | | | | | | | | | | | | | | | |
| D 2 | Monitoring system | | | | | | | | | | | | | | | | | |
| D 3 | Environmental Report | | | | | | | | | | | | | | | | | |
| | Review period | | | | | | | | | | | | | | | | | |
| **E** | **CONSULTATIONS** | | | | | | | | | | | | | | | | | |
| E 1 | Client Meetings | | | | | | | | | | | | | | | | | |
| E 2 | Workshops | | | | | | | | | | | | | | | | | |
| E 3 | Individual consultations with Stakeholders | | | | | | | | | | | | | | | | | |
| **R** | **COMPLETION AND SUBMISSION OF REPORTS** | | | | | | | | | | | | | | | | | |
| R 1 | Inception Report | | | | | | | | | | | | | | | | | |
| R 2 | Scoping Report | | | | | | | | | | | | | | | | | |
| R 3 | Interim Report | | | | | | | | | | | | | | | | | |
| R 4 | Analysis Report | | | | | | | | | | | | | | | | | |
| R 5 | Draft Final Report | | | | | | | | | | | | | | | | | |
| R 6 | Final Report | | | | | | | | | | | | | | | | | |
| R 7 | CDs of the Final Report | | | | | | | | | | | | | | | | | |

Key
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Client Review

## 8.4 Observations and Lessons Learned

### 8.4.1 SEA Approach

Ideally the SEA study should have commenced at the same time as the ITP study. This would have ensured that environmental sustainability issues identified through stakeholder consultation would be included at the very start in the ITP objectives.

In addition, the basis and development of the tools and models to develop projects or scenarios should have been discussed with a wider group of stakeholders, and the SEA Team, at a much earlier stage, for example at the end of the Diagnosis Phase. Moreover, the model prioritises projects based on project evaluation criteria that were not subjected to broad stakeholder consultation, and were not identified by transport sector stakeholders.

During the Inception Phase, the understanding of the SEA Team was that the model would generate a number of projects that would be arranged in various combinations to give a number of scenarios (or alternatives). These scenarios would then provide the basis for consultations and also for analysis by the SEA Team. However, it is now evident that projects will be generated and prioritised by the model, and these would then make up the plan. No plan alternatives or scenarios will be generated. What will be subjected to public consultation is the Draft Integrated Transport Plan. This then poses a challenge for the SEA methodology, in that typically plan scenarios or options are required to be evaluated (as described in our methodology in our Technical Proposal), but in this case the SEA Team will have to "make up" alternatives for evaluation during the Analysis Phase. These alternatives may, for example, be based on the timing of the implementation of prioritised projects that have been generated by the model.

### 8.4.2 The Transport Model

The model that has been developed appears to be biased towards road development because most of the available data is from the roads sector.

There is a danger when long term investments in new infrastructure (such as rail) are compared with short term improvements (such as road upgrading or improvement). In the former case these will be for an investment period of over 50 years, whereas the upgrading and improvements of roads will have an investment horizon of 15 to 20 years. In such cases it is important to consider the full potential life of the investment. As an example, traffic demands on the road network will require the road option to consider the upgrading from single carriageway to dual carriageway to motorway/expressway standard. In addition with the above the existing capital investment on the existing road (the current worth of the existing road) should be considered. For rail, the upgrading will provide a service for 50 years or more with only periodic maintenance of the permanent way. Cost of operating and owning the prime movers and other rolling stock should be considered in identical ways in the analysis of the alternative network investment.

Specialist transport sector investment tools should not be used to provide economic outputs for comparison with other sub-sector economic tools. For example HDM4 is appropriate for comparing the priorities within the road sector but the outputs should not be used to compare priorities with the outputs of economic models normally used in other sectors. The need is either for a standard model that can be applied across all transport sectors using data derived from similar sources, or develop a model that can be used in the context of available data and responds to the requirements of the National Transport Policy.

### 8.4.3 Stakeholder Consultations

One of the fundamental strengths of SEA is the involvement of stakeholders, often covering a broad spectrum of interests, in the process of developing a policy, plan or programme. When submitting our Financial Proposal, we were given a lump sum for Stakeholder Consultations, to cover five (5) workshops, including a "high level" consultation where the draft final report will be presented. The budget does not allow for flexibility in the consultation process, for example the need to hold *ad hoc* stakeholder meetings, focus group discussions, or additional workshops given the number of stakeholders identified (in our case, this is in excess of 110 organisations). In discussions in the Inception Phase with the Study Supervisor, he indicated that any extra budgetary requirements for consultations could be covered under the contingencies in the budget line. Generally, however, this means that budget lines for consultations imposed by the development partners need to consider the flexibility requirements of any stakeholder consultation process, and allow for variations in the number and type of consultations.

It must also be noted that – as highlighted in our Inception Report of March 2009 – the Terms of Reference for the Integrated Transport Plan study did not allow for extensive consultations, nor for the assimilation of feedback from the SEA study, and vice versa. This is a consideration that needs to be addressed by development partners that are financing the development of policies, plans and programmes.

# Appendix A Terms of Reference of the SEA of the ITP

## ANNEX II: TERMS OF REFERENCE FOR STRATEGIC ENVIRONMENTAL ASSESSMENT

### 4.0 SCOPE OF THE WORK

#### 4.1 General

##### *4.1.1 Project Description*

The project will deliver an SEA of the proposed Transport Integration Plan.

The assessment should include the magnitude and significance, in qualitative and quantitative terms, of the potential impacts (direct and indirect, temporary or permanent, positive and negative, short and long-term, transboundary and cumulative) of the transport plan.

*The consultant shall, at the beginning of his assignment, liaise with EPA in order to ascertain all formal EPA requirements on preparing an SEA are taken into account within the present Terms of Reference. In case of discrepancies, the consultant will highlight these in his inception report and make recommendations to overcome them.*

The project will also include:

- **Evaluation of the potential impacts of the proposed policy and plan** against alternatives based on the magnitude of the effects, probably of occurrence, geographical extent and duration and the value of the environment affect.

- **Assessment of compliance of the proposed options for the plan with national environmental legislative and institutional requirements, standards and carrying capacities;** with Ghanaian and EC environmental policy; and with international agreements and treaties; global, regional and national environmental issues and objectives such as climate change and greenhouse emissions.

- **Identification of potential mitigating or complementary measures** to avoid, remedy or compensate the various impacts associated with the policy and plan, including institutional aspects.

- **Identification of potential opportunities to enhance beneficial environmental effects of the proposed policy and plan.**

- **Specification of a monitoring programme** to measure and evaluate the physical, social and economic variables associated with the policy and plan, and the effectiveness of mitigating measures.

- **Capacity Development and Training to implement the monitoring**

- **Extensive consultation with TIP consultants and other stakeholders**.

##### *4.1.2 Geographical area to be covered*

The project will focus on Ghana but must also take into account the ECOWAS countries that either do, or may, require transit through Ghana or compete with Ghana for this transit traffic or as a gateway to the region.

#### *4.1.3 Target groups*

A key objective of the project is to broaden stakeholder involvement in the transport sector, particularly amongst transport users. The stakeholders to be included in the project will be the transport ministries and their agencies, coordinating ministries and agencies such as the EPA, NDPC and MoFEP, ministries responsible for activities creating transport demand (eg mining and tourism), transport users, industries generating transport demand as well as the development partners. The main beneficiaries of the project will be the NDPC and the MoFEP, together with the transport ministries and their agencies; the final beneficiaries of the project will be all the stakeholders, ultimately representing the whole of Ghana society.

### 4.2 Specific activities

The following main activities are foreseen:

#### *4.2.1 Background review and scoping*

The EPA has undertaken an SEA of the Transport Policy and has also been commissioned to undertake an SEA of the transport sector. The first task of the consultant will be to review the EPA's progress and identify how the previous work, including the SEA of transport policy can be incorporated into the current study.

*The consultant shall, at the beginning of his assignment, liaise with EPA in order to ascertain all formal EPA requirements on preparing an SEA are taken into account within the present Terms of Reference. In case of discrepancies, the consultant will highlight these in his inception report and make recommendations to overcome them.*

A national transport policy has been prepared. It provides the strategic objectives for the transport sector. The policy is to be given practical effect through a National Integration Plan, which will set the planning framework. One component of this National Integration Plan is a National Transport Masterplan, which will be the subject of the SEA. The second task will therefore be to review progress on the masterplan and to set out clearly what is to be covered by the SEA and to have this agreed by the inter-ministerial steering committee overseeing the project.

#### *4.2.2 Regulatory framework*

The Consultant will review the relevant Ghana regulatory framework covering environmental matters and its conformity with "best practice" in the EU. The study will be undertaken within the Ghana regulatory structure but the Consultant will also be expected to make recommendations on any deficiencies in Ghanaian regulations and how these might be rectified.

#### *4.2.3 Scoping and Baseline definition*

Another task in the scoping is to identify the scope of the environmental assessment; areas to be addressed will include but not necessarily be limited to:

- **Physical environment** including climate/micro-climate, air quality, water quality and resources, noise and vibration, topography and soils, geology and hydrogeology and natural disaster risks;
- **Ecology**, including biodiversity, ecology and nature conservation including rare, endangered and protected ecosystems, habitats and species, species of commercial importance or with potential to become a nuisance or dangerous;
- **Socio-economic conditions** and human health including archaeology and cultural heritage, values and aspirations, recreational, landscape and visual aspects, employment and access to transport, infrastructure facilities (power/fuel sources, water supply, sewerage, flood control) agricultural development, mineral industry, tourism and other commerce and economic activity (formal and informal), and human health.

- **Stakeholder consultation on scoping.** The final task is to prepare a stakeholder consultation plan to involve both public and private stakeholders, also to be agreed with the inter-ministerial steering committee. The stakeholders must be clearly identified and cover the full range of interests associated with the transport sector and associated environmental matters.

Consultant shall conclude scoping phase with a scoping report, which will also describe the baseline definition.

A suitable baseline needs to be established for the existing situation. This must reflect what is "typical" but also how much variation can be expected around this norm. For the future, the baseline will be defined as the most likely evolution of the environment without the plan. For instance, air quality in an area may get better or worse irrespective of what is contained in the plan. The transport plan will have a short, medium and long-term assessment years (likely to be 5, 10 and 20 years) which may be appropriate for some environmental issues but not others (eg climate change), where a different time perspective may need to be considered.

#### *4.2.4 Collection of baseline data*

Baseline data must be collected to provide the basis for forecasting and monitoring of environmental effects, and to helps in the identification of environmental problems. Whilst the SEA is unlikely to require extensive new data (e.g. through surveys), it will involve some secondary data collection and analysis, mostly through stakeholders. For each of the potential environmental issues, data should be collected to answer the following questions:

- How good or bad is the current situation? Is it getting better or worse? How is the environment likely to change in accordance with or differently from historical trends (eg due to human pressure or climate change)?
- How far is the current situation from thresholds, objectives or targets?
- Are particularly sensitive or important elements of the environment affected: people, resources, species, habitats?
- Are the problems of a large or small scale, reversible or irreversible, permanent or temporary, direct or indirect?
- How difficult would it be to offset or remedy any damage?
- Have there been significant cumulative or synergistic effects over time? Are there expected to be such effects in the future?

#### *4.2.5 Identify environmental problems*

Collection of the baseline data will enable the Consultant to identify the nature and scale of the environmental problems associated with the transport system in Ghana.

#### *4.2.6 Establish future scenarios*

The Consultant must set up alternative scenarios for consideration, including different ways of:

- achieving the objectives of the transport plan;
- dealing with environmental problems (see 4.2.4);
- addressing the transport problems.

A hierarchy of alternatives should be considered from the strategic down to specific measures, including:

- **need or demand** (is it necessary?): Is the apparent demand for travel really necessary? Could it be addressed through demand management and/of fiscal means?
- **mode or process** (how should it be done?): Are there alternatives to the plan, perhaps using alternative technologies, which could be less environmentally damaging than traditional approaches (such as the construction of new infrastructure)?
- **location** (where should it go?): Are there alternative locations for key developments, again which might be less damaging to the environment?

- **scale, timing and implementation**: Are there alternatives in scale, phasing and methods of construction?

These need to be packaged into an appropriate number of scenarios for evaluation

#### *4.2.7 Evaluate scenario options*

Each alternative scenario should be evaluated against the "without plan" baseline, by:

- identifying changes expected to occur;
- describing the potential magnitude, time period, temporary or permanent etc.

The evaluation must answer, for each strategy or principal measure:

- Is it clear exactly what is proposed?
- Are there likely to be significant adverse effects?
- If so, can the effects be avoided or their severity reduced?
- If the effect is uncertain, or depends on how the plan is implemented, how can the uncertainty be reduced?
- How will the impact be felt by social group?

A systematic approach to assessment and documenting effects is essential. It is suggested that a worksheet is completed for each SEA objective/topic and a summary matrix used to identify the interrelationships between the effects associated with different SEA objectives/topics. Although a high level of documentation is involved, it must be remembered that the ultimate objective is not the documentation but to **ensure that the transport plan is as environmentally sound as possible**.

#### *4.2.8 Assess potential mitigation*

Where there are likely to be significant adverse environmental effects, measures should be considered to prevent, reduce or offset these effects through mitigation. Mitigation might include:

- changes to the measures (adding, deleting or refining);
- completely new alternatives;
- technical measures during implementation (eg buffer zones);
- requirements for preliminary EIAs for projects;
- proposals for changing other plans and programmes.

The Consultant must include mitigation concurrently with the evaluation of alternatives. Estimates must be made of the costs of mitigation and any associated monitoring, for inclusion in the comparison of plan alternatives.

#### *4.2.9 Prepare recommendations*

The recommendations must focus on the transport plan and the institutional capacity required for environmental monitoring of the plan. For each of the objectives in the transport plan, and the main measures detailed to achieve them, the Consultant will set out clearly:

- the level of environmental acceptability of the objective/measure as proposed;
- the alternatives considered to improve environmental acceptability;
- the type and cost of any mitigation;
- the proposed solution.

#### *4.2.10 Prepare Environmental Report*

The Environmental Report is the key written document produced from the SEA and must be clearly identifiable as the output from the SEA. As a minimum it must include:

- purpose of the SEA and integration with the transport plan;
- methodology used for the SEA;
- coverage of the Environmental Report with respect to plan components;
- plan objectives and principal means of achievement;
- environmental legislation and policies;

- links to other plans, programmes and environmental objectives;
- definition of the baseline and baseline data;
- existing and foreseeable environmental problems;
- scenario options;
- significant environmental effects of the transport plan;
- the level of environmental acceptability of the objectives/measures as proposed;
- the alternatives considered to improve environmental acceptability;
- the type and cost of any mitigation;
- the recommended way forward;.
- monitoring proposals.

#### *4.2.11 Set up monitoring system*

The objectives of the monitoring are to:

- allow significant adverse environmental effects of the plan to be dealt with early;
- enable the actual effects of the plan to be tested against those predicted in the SEA;
- provide baseline data for future plans;
- allow data to be assembled in advance of project EIAs, helping decision-making at that stage.

The Consultant must set up a plan for undertaking the monitoring, including details of institutional resource requirements and funding and training in how to deal with adverse findings from the monitoring.

#### *4.2.12 Consultation*

Stakeholder consultation is important throughout the project and the Consultant must carry out his stakeholder consultation plan (section 4.2.1). In addition he will need to undertake a process of public consultation on the Environmental Report to **comply with EPA requirements**.

# Appendix B Proceedings of Scoping Workshop

Proceedings of the Scoping Workshop held at the Forest Hotel, Dodowa, on 30th June 2009, are presented in the following pages. Please note that the Appendices are not included here. Those wishing to review the full document should contact the Project Office in East Legon, Accra.

# Strategic Environmental Assessment of the Transport Integration Plan of Ghana

# Service Contract No. 196110 (ex 9 ACP GH 19)

# Proceedings of the Scoping Workshop of 30 June 2009

**July 2009**

# 1 Introduction

The European Union is assisting the Government of Ghana to implement the Transport Sector Planning and Integration Programme (TSPIP, where the Contracting Authority is the Ministry of Finance and Economic Planning (MOFEP), and the Supervisor is the Ministry of Roads & Highways (MORH) in collaboration with the Ministry of Transport (MOT). The TSPIP seeks to provide a detailed preparatory and analytical work on the transport sector of Ghana, culminating in a comprehensive Transport Master Plan, which would provide a sound planning framework for the Transport Sector.

A major component of the TSPIP is to develop an Integrated Transport Plan (ITP) for Ghana. The ITP project is progressing systematically through a process of financial analysis, data collection, model calibration, socio-economic forecasting, scenario building and testing, and project evaluation.

As part of the ITP work plan, the scenarios to be developed will undergo public consultation through a Strategic Environmental Assessment (SEA). The specific objective of the SEA is to address the environmental issues associated with the ITP by identifying opportunities to promote/enhance environmental conditions and recommending complementary measures.

The SEA process involves a series of stakeholder consultations, the first of which is a Scoping Workshop - a requirement of the scoping process proposed by the Environmental Protection Agency (EPA). This document presents the proceedings of the Scoping Workshop held at the Forest Hotel in Dodowa on 30 June 2009.

# 2 Workshop Process and Programme

## 2.1 Workshop Process

The methodology used for the workshop was plenary input sessions by key speakers followed by Question and Answer sessions for clarification and participant inputs. Work sessions were conducted either by the individuals or as group sessions. In all there were six groups, comprising between seven (7) and eight (8) individuals, and composed so that different types of stakeholders were represented in each of the groups.

## 2.2 Workshop Programme

The Workshop started at 09:30 a.m. and ended at 17:00 pm. The full Workshop Programme is presented in Appendix A, while the main activities are described below.

- Welcome address: Introducing ITP and the SEA
- Workshop Objectives and Process
- Description of the SEA of the ITP – Background, Process and Objectives
- Review of the Stakeholder Analysis
  Work Session 1: Stakeholder Matrix Update
- Description of the ITP – Background, Objectives, Process and Integration Issues
  Work Session 2: Outputs & Benefits
  Work Session 3: Factors for Success
  Group Presentations: Outputs & Benefits
  Factors for Success
- Forecasting Transport Demand
  Q&A: Forecasting Transport Demand
- Environmental Sustainability Criteria
  Work session 4: Main Environmental Sustainability Concerns related to the Transport Sector
- Next Steps and Wrap Up

# 3 Workshop Proceedings

## 3.1 Welcome Address: Introducing ITP and the SEA

Mr. Godwin Brocke, Director of Policy and Planning, Ministry of Roads and Highway, welcomed participants to the Workshop. He briefly described the background to the ITP and SEA studies as components of the EU-financed Transport Sector Planning and Integration Programme.

He thanked stakeholders for participating in the workshop which will allow the scoping of the SEA. He assured the participants that the outcome of the workshop will be fed back into the ITP process through the SEA scoping and declared the workshop open.

## 3.2 Workshop Purpose and Objectives

The EPA's scoping process requires that a Scoping Workshop is held in order to enable the scope of the SEA study to be established, bearing in mind the concerns and desired outputs of transport sector stakeholders.

The overall workshop objectives were as follows:

- To facilitate a broad stakeholder involvement in the development of the Integrated Transport Plan and associated processes;

- To continue with the process of awareness raising and capacity building in the development of SEA in Ghana.

The specific objectives of the workshop were to:

- Obtain participants' views and comments on the stakeholder analysis;

- Establish prioritised expectations of the stakeholders of the outputs and benefits of an Integrated Transport Planning process;

- Establish factors and conditions required for the success of an Integrated Transport Planning process and plan;

- Inform the stakeholders on the baseline integrated transport network and the demand scenarios to be used for modelling the integrated transport plan; and

- Identify stakeholder perceptions of the main environmental sustainability (natural resources or bio-physical, socio-cultural, economic and institutional) issues of concern as well as desired aims with regard to the ITP.

## 3.3 Description of the SEA of the ITP – Background, Process and Objectives

A presentation of the SEA of the ITP was made. SEA is defined as a:

> *...formalized, systematic and comprehensive process of evaluating the environmental effects of a policy, plan and programme and its alternatives, including the preparation of a written report on the findings of that evaluation, and using the findings in publicly accountable decision-making.*

The SEA of the ITP is to address the environmental issues associated with the ITP. Its outputs are to identify the potentially significant environmental issues arising from ITP, the opportunities to promote/enhance environmental conditions and to recommend actions for mitigation or complementary measures.

The presentation covered the SEA Process, Approach and Methodology; the SEA study activities and the SEA study deliverables. It described the phases in the SEA study and outlined for participants the timeframe for the SEA study. Presentation notes are presented in Appendix C.

## 3.4 Review and Analysis of the Stakeholder Identification Process

In consultation with various institutions and individuals the following criteria were used to identify and agree:

a) Stakeholder organisations, institutions and agencies which would influence the outcome SEA process;

b) Key persons or positions from the organisations, institutions and agencies who should participate in the SEA process;

c) Mode/strategy of communications with each category of stakeholders.

| **Stakeholder Criteria** |
|---|
| • Stakeholder – individual, institution, organisation, etc<br>• What/ whom he/she/it represents<br>• Stake in ITP and/or SEA<br>• Knowledge of Transport Sector Issues<br>• Ability to Influence Outcomes<br>• Level in Communication Strategy (1,2, 3 or 4) |

Workshop participants were based on this compilation, and while every effort was made to invite all those listed, it was decided that some groups would be consulted through focal group discussions. The list of stakeholders who participated in the Scoping Workshop is presented in Appendix B of this document.

### 3.4.1 Work Session 1: Stakeholder Analysis

The scoping process recommended by the EPA (as well as the EU SEA Directive) requires stakeholders to be involved in the process of stakeholder identification.

Workshop participants were therefore briefed on the purpose, methodology and process of stakeholder identification. They were presented with the Stakeholder Matrix and asked to:

- Review the stakeholder listing;
- Make amendments to the matrix; and
- Add to the list using a blank matrix form.

A composite list of suggested additional stakeholders was finalised after the workshop, and this is presented in Appendix D.

## 3.5 Description of the ITP – Background, Objectives, Process and Integration Issues

The Team Leader of the ITP study briefed stakeholders on the Government of Ghana's commitment to implement an integrated transport planning process arising out of the National Transport Policy (NTP) and the current Transport Sector Development Programme (TSDP). An integrated transport plan (ITP) will be produced as an output from the process to take over from the TSDP as the primary planning document for the transport sector.

Participants were taken through an integrated economic and transport planning process which involves macro-economic forecasts, socio-economic forecasts, alternative transport demands, diagnostics of a base network, analysis of supply scenarios, project identifying, evaluating and prioritising projects, analysis of regulatory and institutional issues; and plan formulation.

Speaking on the outputs and benefits of the integrated approach, the speaker indicated that a series of tests will be conducted on supply scenarios meeting demand, and the identification of specific problems for testing solutions. An example was given on alternative solutions for dealing with link-based (between 2 zones) traffic congestion. One solution could be to improve infrastructure – identify problems, identify solutions and test solutions, while another solution could be to introduce alternative transport mode(s).

Other forms of decision-making may depend on testing projects proposed in other programmes/plans, or may be policy-based. This may, for example, mean increasing the modal share for a particular mode; or implementation of institutional and regulatory measures; or applying real costs (without subsidies).

He indicated that enhancing decision making yields strategic benefits. These benefits, inter alia, underpin Government's policy led and coordinated approach to development, allow for sector plans that are focussed on Government targets for economic growth and poverty reduction, prioritise and target Government investment to maximise benefits, reduce uncertainty and risk for investors and encourage more credible private sector engagement in development.

A number of factors affecting implementation were then discussed. These included leadership, coherence (consistency of aims and means), availability of data and other information, good working practices and capacity and commitment to follow-through with implementation and with the next steps of the ITP process.

Presentation notes are found in Appendix C.

### 3.5.1 Work Session 2: ITP Outputs and Benefits

At the end of the presentation participants were divided into working groups of seven to eight persons in order to:

- Identify the strategic benefits to be derived from an integrated transport planning process at the national level and at sector level;
- Prioritise these strategic benefits;
- Identify how these benefits can be measured; for example, through (i) improved development (eg. as stipulated in the GPRS II), (ii) increased production (eg. commodities), or (iii) improved sector performance (lowering costs).

An analysis of the summary of the group findings indicates that participants perceived thirteen (13) outputs and benefits, which they ranked as shown in Table 3-1 below. Detailed results are provided in Appendix D.

**Table 3-1: Analysis Summary of Outputs and Benefits**

| Ranking | Benefit |
|---|---|
| 1 | Equitable distribution of state resources |
| 2 | Approach:<br>i. facilitates national planning and effective/ efficient resource allocation<br>ii. offers a means of harmonizing development partner / sector interventions<br>iii. leads to coordinated and integrated approach to development; and provides<br>iv. seamless travel |
| 3 | Lower reconstruction cost of transportation infrastructure |
| 4 | Efficient allocation of right of way for utilities (electricity, water, gas, communication .etc) |
| 5 | Enhanced private sector involvement and maximized use of resources |
| 6 | Improved private sector investment in transport sector; facilitate foreign direct investment; reduced burden on Government and leading to Government savings |
| 7 | Reduced congestion (traffic) leading to time saving, reduced import bill on fuel, reduced emission ($CO_2$), improved productivity, reduced poverty and increased national incomes |
| 8 | Facilitate foreign direct investment |
| 9 | Reduces uncertainty and risk for investment |
| 10 | Ensures stakeholders participation |
| 11 | Easy access and affordable transport providing access to social service and reduced accidents and social vices, especially, highway robbery |
| 12 | Leads to growth and poverty reduction |
| 13 | Less environmental pollution |

### 3.5.2 Work Session 3: Factors for Success

A second work session on the ITP planning process aimed to establish factors and conditions required for the success of an Integrated Transport Planning process and plan, as well as identify barriers, commitments and/or actions and the organisations responsible for implementing or ensuring these commitments and actions. The themes for success, based on the ITP presentation, were leadership; coherence; data and information sharing; work practices, capacity and institutional coordination; follow through, monitoring and evaluation; and financial and budgetary constraints. The results are summarised in the table below, while details are provided in Appendix D.

**Table 3-2: Factors for Success**

| BARRIERS TO ACHIEVING THESE CONDITIONS | COMMITMENTS/ACTION REQUIRED | ORGANIZATION/ DEPARTMENT RESPONSIBLE |
|---|---|---|
| **Leadership** | | |
| - Knowledge of the leaders | - Training and re training of leaders | Public Service Commission |
| - Political will and commitment to prepare and implement plans | - Autonomy of institutions<br>- Team work<br>- Empowerment of leaders<br>- Sensitization of leadership<br>- Acts of parliament<br>- Invoice political parties<br>- De-couple politics from technical issues<br>- Implement transport policy | - National Development Planning Commission (NDPC)<br>- Environmental Protection Agency (EPA)<br>- Ministry of Transport (MoT)<br>- Ministry of Roads and Highways (MRH)<br>- Parliament |
| - Lack of buy-in by leadership across political divide<br>- Lack of clearly defined mechanisms for collaboration | - Leadership must transcend political divide | The Office of the President |
| **Coherence** | | |
| - Consistency in Policy, Plan and Programme (PPP) objectives | - Empowerment of leaders<br>- Resource<br>- Availability of skilled personnel | National Development Planning Commission (NDPC) MDAs, MMDAs |
| - Regular changes in policies<br>- Lack of integrated policy framework<br>- Turf protection | - Realignment of political party and national development agenda | The Office of the President |
| - Change of government plans and policies | - Advocacy / Sensitization of Legislation (Political parties, Cabinet etc) | - National Development Planning Commission (NDPC)<br>- Environmental Protection agency (EPA)<br>- Ministry of Transport(MoT)<br>- Ministry of Roads and Highways(MRH)<br>- Parliament |
| - Political will | - Implement PPP's<br>- Strengthen the National Development Planning Commission (NDPC) | National Development Planning Commission (NDPC)<br>- Parliament |
| **Data and Information Sharing** | | |
| - No data bank<br>- Lack of up-to –date data and information<br>- Authenticity of data source<br>- Difficulty in accessing data | - Need for data bank<br>- Trained personnel to handle data<br>- Ease of accessing data<br>- WAN | Ghana Statistical Service(GSS)<br><br><br><br>Legislator |

| BARRIERS TO ACHIEVING THESE CONDITIONS | COMMITMENTS/ACTION REQUIRED | ORGANIZATION/ DEPARTMENT RESPONSIBLE |
|---|---|---|
| | - Freedom of information law | |
| - Ineffective data collection, collation and management system | - Establish an integrated national data management system<br>- Clearly define mandate for data collection and management<br>- Establishment of data collection centres in MDAs<br>- Provision of adequate resources for data collection and management | Ghana Statistical Service(GSS) And all MDAs, |
| - Unorganized data collection, processing , storage and retrieval | - Proper coordination<br>- Strengthen PPMEDs | - Ghana Statistical Service(GSS)<br>- National Development Planning Commission (NDPC)<br>- (MDAs to provide) |
| - Lack and improper data management systems | - Sector specific data management system implemented | MDAs |
| **Working Practices, Capacity, and Institutional Coordination** | | |
| - Poor attitude to work<br>- Poor leadership<br>- Lack of motivation<br>- Lack of sectoral linkages<br>- Lack of team work<br>- Inadequate skills | - Attitudinal change<br>- Training and re-training<br>- Encourage sectoral linkages(inter -ministerial committees)<br>- Skills improvement | All stakeholders |
| - Ineffective professional skills<br>- Inadequate resource<br>- Challenging labour laws | - | - |
| - Inadequate resource<br>- Inadequate capacity<br>- Weak managerial practices | - Intensify capacity building<br>- Improve managerial practices through training | - MDAs and Training institutions E.g. KNUST, GIMPA etc. |
| - Little or no coordination among sectors and MDA's in development implementing , monitoring and evaluation of PPP's | - The National Development Planning Commissions (NDPC) role in coordination should be improved | National Development Planning Commission (NDPC) |
| **Follow Through, Monitoring and Evaluation** | | |
| - Improper records management<br>- Lack of resources<br>- Low level of enforcement of regulations | - Record management<br>- Adequate resources<br>- Enforcement of regulations | All stakeholders |
| - Poor reporting systems<br>- Inadequate monitoring and evaluation systems | - Provide adequate resources<br>- Intensify supervision | - National Development Planning Commission (NDPC)<br>- Environmental Protection agency (EPA)<br>- Ministry of Transport (MoT)<br>- Ministry of Roads and Highways(MRH)<br>- Ghana Statistical Service(GSS)<br>- MDA's |
| - Lack of effective Monitoring and evaluation systems | - Develop and implement effective Monitoring and evaluation systems in place | National Development Planning Commission (NDPC) |
| **Finance and Budget Constraints** | | |
| - Low revenue generation | - Adequate budget allocation | Ministry of Finance and Economic Planning(MoFEP) |

| BARRIERS TO ACHIEVING THESE CONDITIONS | COMMITMENTS/ACTION REQUIRED | ORGANIZATION/ DEPARTMENT RESPONSIBLE |
|---|---|---|
| - Lower coverage of tax net<br>- Lack of data on areas of revenue generation | - Widen tax net<br>- Reliable data bank | Internal Revenue Service(IRS)<br>Value Add Tax(VAT)<br>Customs, Excise and Preventive Services (CEPS), etc |

## 3.6 Forecasting Transport Demand

The Transport Modeller from the ITP Project Team briefed stakeholders on the systematic forecasting of transport demand, based on a process of financial analysis, data collection, model calibration, socio-economic forecasting, scenario building and testing and project evaluation. Notes from the presentation are contained in Appendix C.

### 3.6.1 Q&A Session

In the Question and Answer Session that followed, stakeholders raised issues on:

- Which agency to be responsible for operating the integrated transport;
- Funding sources with fares as a factor of revenue generation;
- Issues of lower transport cost vis- a- vis lower construction cost;
- Defining the role of the NDPC and the various sectors;
- Defining the coordination that should exist between the NDPC and the various sectors to implement all agreed plans;
- Empowering District Assemblies to produce good plans to fit into the NDPC plans;
- Compliance by the various sectors with NDPC guidelines;
- Factors causing the ineffectiveness of NDPC to plan and take decisions;
- Sources and bases of forecast data, including variables used to determine expected growth; difficulties obtaining data in Ghana; base data vis-a-vis projections of urbanization; Ghana Statistical Service data on population; data on urbanization and cement to be obtained and used in growth projections; consideration of international traffic: political and social factors on traffic demand.

## 3.7 Environmental Sustainability Criteria

The presentation on Environmental Sustainability Concerns began with a description on sustainability-led SEA. Initially this approach was based on three (3) main pillars: Natural Environment, Socio-Cultural and Economic. Following the SEA of the GPRS, the Ghanaian SEA practice introduced a fourth pillar – the institutional pillar. This refers to the decision-making process, governance, organisational capacities, regulatory and administrative context in which policies, plans or programmes (PPPs) operate.

Sustainability of a PPP requires assuring a balance between these four pillars through subjecting the PPP to analysis based on sustainability criteria defined for each pillar. Criteria, reflecting either desired ends or issues of concern, are defined under each pillar, through stakeholder consultations. These criteria also reflect international, national and/or local objectives.

Sustainability criteria are then evaluated and prioritised to define the scope of the SEA. Subsequent analyses of the PPP options/alternatives will be carried out using these criteria. PPP are, thus, refined to achieve sustainability.

The initial list of concerns produced by the SEA team from a review of the documents of the National Transport Policy, GPRS and other sources, was presented to the workshop participants. Ultimately criteria prioritised by the stakeholders will form the basis for establishing baselines and SEA objectives, and later analysing the sustainability of ITP proposals. In addition, the ITP proposals are to be tested for compatibility against National Transport Policy.

Presentation notes can be found in Appendix C.

### 3.7.1 Work Session 4: Identification of Environmental Sustainability Criteria

Participants reviewed the list of environmental sustainability criteria in their work groups and added or amended the list. They prioritised the three (3) most important concerns – issues and desirable outcomes – to the transport sector under each of the main environmental sustainability pillars (natural resources or bio-physical, socio-cultural, economic and institutional) with regard to the ITP process and plan. A summary of the results of this group session are presented in Table 3-3 below, and detailed findings are presented in Appendix D.

**Table 3-3: Environmental Sustainability Concerns**

| Pillars of Sustainability | Concerns | Overall |
|---|---|---|
| Natural Resources or Bio-physical | Air quality | 1 |
| | Spillage of hazardous chemicals | |
| | Loss of biodiversity | 3 |
| | Loss of habitat (of flora and fauna) | |
| | Water quality | 3 |
| | Land degradation | 2 |
| | Waste generation | |
| | Prevention of floods | |
| | Noise and vibration | |
| Social and Cultural | Accessibility by ALL to transport services | |
| | Accessibility by ALL to basic social and technical services through transportation | 3 |
| | Transportation safety | 1 |
| | Congestion | |
| | Loss of land, crops, property | |
| | Relocation and involuntary resettlement | 2 |
| | Gender mainstreaming with emphasis on women's participation at all levels | |
| | Public health, including STD/HIV/AIDS, noise, air quality | 3 |
| | Access to information | |
| | Cultural diversity and heritage | |
| | Indigenous knowledge possessed by both men and women | |
| | Livelihood strategies | |
| | Changes in land use | |
| | Severance of communities | |
| | Equity and social cohesion | |

| Pillars of Sustainability | Concerns | Overall |
|---|---|---|
| Economic | Economic growth and stability | 1 |
| | Productivity / time loss | |
| | Job creation and income generation through investment | 2 |
| | Fuel consumption | |
| | Cost recovery for sustaining provision of services | |
| | Affordability of transportation services by ALL | |
| | Trade and commerce | |
| | Poverty reduction | 3 |
| | Labour standards | |
| | Support for mass transport operators and hauling services | |
| Institutional | Good governance | 1 |
| | Dissemination and acceptance of policies, plans, programmes and legislation | |
| | Private sector participation and protection of investment | 3 |
| | Inter/cross sectoral institutional collaboration and coordination roles and mandates | 2 |
| | Structures for monitoring, enforcement and compliance | |
| | Institutional strengthening and capacity building | 2 |
| | Feasibility of options in the local context (reality check) | |

# 4 Next Steps, Wrap Up and Closing

Participants were then briefed on the next steps using the timeframe for the SEA as follows:

| | |
|---|---|
| Mobilisation/Inception Phase: | Feb – Mar 2009 |
| Scoping Phase: | May – Jul 2009 |
| Analysis Phase: | Aug – Dec 2009 |
| Environmental Strategy/Report: | Jan - Feb 2010 |
| Preparation of Draft final report: | Mar- Apr 2010 |
| Finalising SEA Report: | April 2010 |

A diagrammatic presentation was made on the anticipated coordination between the ITP process and that of the SEA showing inputs by the SEA process into the ITP process and vice versa (see Appendix E: Integrated Transport Plan-Strategic Environmental Assessment - TSPIP Coordination).

The workshop ended at 17:00 hours.

**WORKSHOP ON THE STRATEGIC ENVIRONMENTAL ASSESSMENT OF THE INTEGRATED TRANSPORT PLAN**
**Forest Hotel, Dodowa**

Tuesday 30th June 2009

## Workshop Programme

| Time | Programme Item | Workshop mode | Presenter / Moderator |
|---|---|---|---|
| 08.30 – 09.00 | Participants arrive, registration | | |
| 09.00 – 09.30 | Welcome + Introduction of Participants | Talk | SEA Team |
| 09.30 – 09.40 | Welcome address: Introducing ITP and the SEA | Talk | Chairperson (MORT) |
| 09.40 – 09.50 | Workshop Objectives and Process | Presentation | SEA Team |
| 09.50 – 10.05 | Description of the SEA of the ITP – Background, Process and Objectives | Presentation | SEA Team |
| 10.05 – 10.15 | Review of the Stakeholder Analysis | Individual analysis | SEA Team |
| 10.15 – 10.30 | Tea | | |
| 10.30 – 11.10 | Description of the ITP – Background, Objectives, Process and Integration Issues | Presentation | ITP Team |
| 11.10 – 12.05 | Work session: Outputs & Benefits | Group discussions | Groups |
| 12.05 – 13.00 | Work session: Factors for Success | Group discussions | Groups |
| 13.00 – 13.45 | Lunch | | |
| 13.45 – 14.30 | Group Presentations: Outputs & Benefits<br>Factors for Success | By group to plenary | Groups<br>Moderator: SEA Team |
| 14.30 – 15.00 | Forecasting Transport Demand | Presentation | ITP Team |
| 15.00 – 15.20 | Q&A: Forecasting Transport Demand | Plenary | Moderator: SEA Team |
| 15.20 – 15.30 | Environmental Sustainability Criteria | Presentation | SEA Team |
| 15.30 – 16.20 | Main Environmental Sustainability Concerns related to the Transport Sector | Group discussions | Groups |
| 16.20 – 16.30 | Next Steps and Wrap Up | Plenary | SEA Team |
| 16.30 | Refreshments<br>Participants leave | | |

## List of Workshop Participants

| No | Name | Organization | Designation | Email | Telephone(Cell) |
|---|---|---|---|---|---|
| 1 | Adjei-Fosu K. | National Development Planning Commission (NDPC) | P.P Analyst | kwakujna@yahoo.com | 0244824402 |
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| 4 | Alan Gilham | EGIS/BCEOM | Team leader ITP | | |
| 5 | Alhaj Saaka Dumba | Ministry of Health | Transport Planner | saakad@yahoo.com | 0208240923 |
| 6 | Alhaji E.A Tetteh | Ghana Private Road Transport Union (GPRTU) | Reg. Chairman | | 0277570621 |
| 7 | Amanor Jonathan-Kwashie | GIFF | General Secretary | jonathanamanor@yahoo.com | 0245728685 |
| 8 | Annon Nunez | EGIS/BCEOM | Transport Modeller | | |
| 9 | Arundhati Inamdar-Willetts | SEA -Team | Team leader SEA | | |
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| 11 | Dinah Kofigah | MDC | | | |
| 12 | Ebenezer Appah-Sanpong | Environmental Protection Agency | Dep. Director | esampong@epaghana.org | 0277163050 |
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| 19 | Evans Darko-Mensah | SEA -Team | | | |

| | | | | | |
|---|---|---|---|---|---|
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| 39 | Naa Densua Aryeetey | Ghana Shippers Council | | naaryeetey@yahoo.com | 0244230757 |

| | | | | | |
|---|---|---|---|---|---|
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| 42 | James Annorbah-Sarpei | SEA -Team | | | |
| 43 | Rapael Annorbah-Sarpei | MDC | | | |
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| 45 | Richard Amamoo | SEA -Team | | | |
| 46 | Richard Leigh | EGIS/BCEOM | | | |
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| 50 | Ross Mclellan | GBC | | | |
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## Consolidated Stakeholder Matrix

### MINISTRIES, DEPARTMENTS AND AGENCIES

| Stakeholder | Name of Nominee (if available) | What do they represent? | Stake in ITP and/or SEA | Knowledge of Transport Sector Issues | Ability to Influence Outcome | Communication Strategy Level 1,2, 3 or 4 | Comments |
|---|---|---|---|---|---|---|---|
| **National Development Planning Commission (NDPC)** | | Overall responsibility for National development planning | | H | H | 1 | Commission is an Agency of the Presidency and includes all the key Cabinet Ministers |
| **Parliamentary Subcommittee on Transport** | | Overall legislative and budgetary responsibility for national development | Political dividend from Plan Success | H | H | 3 | |
| **Ministry of Roads and Highways** | Chief Director; Head of Planning and Policy – Godwin Brocke | Plan co-owner Policy, Planning, Budgeting and Monitoring | Plan success | H | H | 1 | |
| Department of Urban Roads | Director: | Implementer – urban roads | Intermodal significance | H | H | 2 | SEA to be carried out for DUR |
| Department of Feeder Roads | Director: | Implementer Rural feeder roads | Intermodal significance | H | H | 2 | |
| Ghana Highways Authority | Chief Executive: | Implementer Highways and trunk roads | Intermodal significance | H | H | 2 | |
| Metro Mass Transit | Director | Implementer – bus transport | Intermodal significance | M | M | 3 | |
| National Road Safety Council | Director: | Regulator | Impacts of plan | M | M | 3 | |
| Driver and Vehicle Licensing Authority (DVLA) | Director: Amegashie | Regulator | Impact of plan | M | M | 3 | DVLA implementing Vehicle Emission Testing |
| **Ministry of Transport** | | Plan Co-owner Policy, Planning, Budgeting and Monitoring | Plan success | H | H | 1 | |
| Ghana Maritime Authority | | Regulator | Intermodal significance | H | H | 1 | |
| Regional Maritime University | | | Intermodal significance | M | M | 3 | |
| Ghana Railway Corporation | | Implementer National railways | Intermodal significance | H | H | 2 | |
| Ghana Ports & Harbours Authority | | Implementer / Regulator Ports and harbours | Intermodal significance | H | H | 2 | SEA of Port Master Plan carried out |
| Ghana Shippers Council | | Regulator | | H | H | 2 | |
| Volta Lake Transport Co | | Implementer Inland | Intermodal significance | H | H | 2 | |

| Stakeholder | Name of Nominee (if available) | What do they represent? | Stake in ITP and/or SEA | Knowledge of Transport Sector Issues | Ability to Influence Outcome | Communication Strategy Level 1,2, 3 or 4 | Comments |
|---|---|---|---|---|---|---|---|
| | | waterways | | | | | |
| PSC-Tema Shipyard | | Implementer Maritime transport | Intermodal significance | M | M | 2 | |
| Boankra Inland Port | | Implementer Inland container depot | Intermodal significance | H | M | 2 | Not yet operational Being implemented by GSC and GPHA |
| Ghana Civil Aviation Authority | | Regulator Air transport | Intermodal significance | H | H | 2 | |
| Ghana Airports Company | | Implementer air transport | Intermodal significance | H | M | 2 | |
| Ghana International Airlines | | Airline operations | Intermodal significance | H | M | 2 | |
| **Ministry of Energy** | | | | | | | |
| Bulk Oil Storage and Transport Company | | Implementer Pipeline transport | Intermodal significance | H | H | 2 | |
| National Petroleum Authority | | Regulator – Fuel pricing | Fuel Pricing affects costs of various modes | H | H | 2 | |
| **Ministry of Environment , Science and Technology** | | | | | | | |
| Environmental Protection Agency | | Regulator | Ensuring SEA recommendations incorporated into plan | H | H | 1 | |
| **Ministry of Trade and Industry** | | | | | | | |
| Ghana Free Zones Board | | Regulator | Depends on modes for Export | H | H | 2 | |
| **Ministry of Finance and Economic Planning** | | NAO Policy, Planning, Budgeting and Monitoring | NAO | H | H | 1 | |
| **Ministry of Lands and Mineral Resources** | | | | | | | |
| Minerals Commission | | Transport system user | Dependent on rail for transport of minerals | H | M | 3 | |
| Forestry Commission | | Transport system user | logging operations – depend on road transport | M | M | 3 | |
| Land Valuation Board | | Deal with compensation issues on behalf of GOG | Projects that may require acquisition of land | M | L | 3 | |
| **Ministry of Interior** | | | | M | M | 3 | |
| Ghana Police Service | | Law Enforcement | Maintenance of Law and order in Road Transportation | M | M | 3 | |
| **Ministry of Tourism** | | Transport system user | Dependent on various transport modes for access to tourist sites | M | M | 3 | |
| **Ministry of Food and Agriculture** | | Transport system user | Dependent on roads for transport of produce | M | M | 3 | |

| Stakeholder | Name of Nominee (if available) | What do they represent? | Stake in ITP and/or SEA | Knowledge of Transport Sector Issues | Ability to Influence Outcome | Communication Strategy Level 1,2, 3 or 4 | Comments |
|---|---|---|---|---|---|---|---|
| **Ministry of Health** | | Transport system user | Dependent on roads for access to health facilities | M | M | 3 | |
| **Ministry of Education** | | Transport system user | Dependent on roads for access to schools | M | M | 3 | |
| **Ministry of Information** | | Communicator of national development agenda | Dependent on various transport modes for dissemination of information | M | M | 3 | |
| **Ministry of Communications** | | Development of communications and related infrastructure | Access may affect communication infrastructure | L | L | 4 | |
| **Ministry of Local Government and Rural Development** | | Decentralisation policy and Rural Infrastructure | Decentralisation affects planning as a whole | H | H | 2 | District level consultation through this Ministry |
| Department of Town and Country Planning | | Responsible for land use planning | Provides link between transport systems and planning | H | H | 2 | |
| **Ministry of Women and Children's Affairs** | | Women and children who are transport users | Access to health, education, market facilities by women | M | M | 3 | |
| **National House of Chiefs** | | Actors involved in releasing land for development of roads, rail, depots and terminals | Have land for development and have socio-cultural stake in socio-cultural implication of plan | M | M | 3 | |

**DEVELOPMENT PARTNERS**

| Stakeholder | Name of Nominee | What do they represent? | Stake in ITP and/or SEA | Knowledge of Transport Sector Issues | Ability to Influence Outcome | Communication Strategy Level 1,2, 3 or 4 | Comments |
|---|---|---|---|---|---|---|---|
| European Union | Jannik Vaa Willem Roodhart | Financier | Road sector development | H | H | 1 | Interest in SEA development in Ghana |
| World Bank | | Financier | Road sector development | H | H | 2 | Interest in SEA development in Ghana |
| JICA/OECF | | Financier | Road sector development | H | H | 2 | |
| African Development Bank | | Financier | Road sector development | H | H | 2 | |
| DFID | | Financier | Road sector development | H | H | 2 | Interest in SEA development in Ghana |
| Royal Netherlands Embassy | Sean Doolan | Financier | Lead donor in Environment | H | H | 2 | Interest in SEA development in Ghana |
| Danida | | Financier | Road sector development, indicators for transport | H | M | 3 | Interest in SEA development in Ghana |
| Agence France Developement | | Financier | Road sector development | H | M | 2 | |
| Govt of China | | Financier | Road sector development | H | M | 2 | |
| OPEC FUND | | Financier | Road sector development | H | H | 3 | |
| BADEA | | Financier | Road sector development | H | H | 3 | |

**CONSULTANTS/CONSULTING FIRMS**

| Stakeholder | Name of Nominee | What do they represent? | Stake in ITP and/or SEA | Knowledge of Transport Sector Issues | Ability to Influence Outcome | Communication Strategy Level 1,2, 3 or 4 | Comments |
|---|---|---|---|---|---|---|---|
| EGIS/BCEOM | Alan Gilham | Planner | Developing ITP | H | H | 1 | |
| Jacobs | Richard Edmunds | Monitor | Monitoring and evaluation of TSDP | H | H | 2 | |
| | Stuart Kane | TSDP component study | Project finance management – implications on finances required for monitoring environmental indicators | H | M | 2 | |
| Louis Berger SAS | Alemayehu Ambo | TSDP component study | Capacity development in policy making as well as monitoring SEA | H | M | 2 | |

**TRANSPORT SECTOR ORGANISATIONS FOR USERS/BENEFICIARIES**

| Stakeholder | Name of Nominee | What do they represent? | Stake in ITP and/or SEA | Knowledge of Transport Sector Issues | Ability to Influence Outcome | Communication Strategy Level 1,2, 3 or 4 | Comments |
|---|---|---|---|---|---|---|---|
| Ghana Freight Forwarders Association | | Major transport mode | Could be directly affected by plan | H | H | 2 | |
| Boat operators | | Major transport mode | Could be directly affected by plan | H | H | 2 | |
| Ghana Private Road Transport Union (GPRTU) | | Major transport mode | Could be directly affected by plan | H | H | 2 | |
| Progressive Transport Owners Association (PROTOA) | | Major transport mode | Could be directly affected by plan | H | H | 2 | |
| Ghana Road Transport Coordinating Council | | Road users and transport owners and government | Could be directly affected by the plan | H | M | 3 | |
| Ghana Haulage Transport Drivers Union | | Major transport mode | Could be directly affected by plan | H | H | 2 | |
| Ghana Institute of Engineers | | Local engineering firms | Firms involved in transport sector projects | H | M | 3 | |
| Ghana Association of Planners | | Planners | Firms involved in transport sector projects | M | M | 3 | |
| Ghana Association of Road Contractors | | Contractors | Firms involved in transport sector projects | H | M | 3 | |

**OTHER ORGANISATIONS**

| Stakeholder | Name of Nominee | What do they represent? | Stake in ITP and/or SEA | Knowledge of Transport Sector Issues | Ability to Influence Outcome | Communication Strategy Level 1,2, 3 or 4 | Comments |
|---|---|---|---|---|---|---|---|
| Ghana Cocoa Board | | Responsible for development and trade of cocoa | Transport of cocoa | H | H | 3 | |
| Ghana Timber Millers Organisation | | Timber millers | Transport of timber | H | M | 3 | |
| Ghana Bauxite Company | Joe Nsiah | Bauxite mining | Transport of bauxite for export | H | H | 3 | |

| Stakeholder | Name of Nominee | What do they represent? | Stake in ITP and/or SEA | Knowledge of Transport Sector Issues | Ability to Influence Outcome | Communication Strategy Level 1,2, 3 or 4 | Comments |
|---|---|---|---|---|---|---|---|
| Ghana Manganese Company | | Manganese mining | Transport of manganese for export | H | H | 3 | |
| Federation of Environmental Journalists | | Environmental journalists | Dissemination of environmental information | M | M | 3 | |
| Friends of the Earth | | Environmental NGOs | Environmental implications of plan | M | M | 3 | |
| Millennium Development Authority | | Authority to achieve millennium development challenges | Have funds for transport sector | M | L | 3 | |
| Ghana Federation for the Disabled | | Social NGO | Transport policy emphasises | M | M | 3 | |
| Centre for Community Studies, Action and Development | Executive Director- Mrs. Vera Quaye 0244379355 | Social Development NGO | Research/Social implications of plan and dissemination of social-cultural information | M | M | 3 | |
| Centre for Environment, Health Research and Training | Mr Yaw Amoyaw-Osei | Consultancy. | Developed ESMF for Transport Sector | H | M | 3 | |
| NETRIGHT | Rose Mensah-Kutin | Gender issues | Gender responsiveness | H | H | 3 | |
| AGE | Elizabeth Akpalu | Equity | Women's right in transport | H | H | 3 | |
| Women in Broadcasting | Sarah Akrofi Quarcoo | Gender issues | Women's right in transport | H | H | 3 | |
| CENSUDI | Margaret Mary Isacar | Deprived communities | Access for marginalized groups | H | H | 3 | |
| TUC | Adwoa Sakyi | Workers and farmers right | Rural transportation | H | H | 3 | |
| Daily Graphic | Salome Donkor | Transport reports in newspapers | Media role in transportation | H | H | 3 | |
| Market women association | Victoria Mensah | Women food transport | Access, affordability and women needs | H | H | 3 | |
| Ghanaian Times | Adowa Asiedu | Transport reports in newspapers | Media role in transportation | H | H | 3 | |
| Political Parties | | | | | | 2 | |
| Ghana association of Industry | | | | | | 3 | |
| Institute of economic affairs | | | | | | 3 | |
| Ghana chamber of commerce | | | | | | 3 | |
| Kosmos Energy and Group | | | | | | 3 | |
| Tullow Ghana | | | | | | 3 | |
| Ministry Of Justice and Attorney General's Department | Solicitor General | Justice to all transport users | Provide Legal Aid to transport users | M | H | 3 | |
| Driving schools | Principals | | | H | M | 3 | |
| Media House | | Disseminator of development agenda | Provide link between government, implementers and Civic society/users and stakeholders | L | M | 4 | |
| International land developing compies | | Land developers | Firms involved in land development | H | H | 2 | |

| Stakeholder | Name of Nominee | What do they represent? | Stake in ITP and/or SEA | Knowledge of Transport Sector Issues | Ability to Influence Outcome | Communication Strategy Level 1,2, 3 or 4 | Comments |
|---|---|---|---|---|---|---|---|
| Ghana institute of logistics | David Gary | Road users | Affected by plans directly | H | H | 1 | |
| Aviance Ghana limited | | Air cargo operators | Dependent on airlines for transport of dangerous and hazardous goods | M | M | 3 | |
| A.H. Menzies | | Air cargo operators | Dependent on airlines for transport of dangerous and hazardous goods | M | M | 3 | |
| Ghana Chamber Of Mines | Chief Executive Officer | Transport system user | Dependent on roads and rail for transport of equipment, chemical inputs for the mining industry | H | M | 2 | |
| GNAT | | Give education | | M | H | 4 | |
| Police | | To enforce the law | | H | H | 4 | |
| Ghana bar association | | Enforce law | | M | H | 3 | |
| Oil marketing companies | Mr. Agyeman Duah | Users and implementers | Could be directly affected by the plan | | | | |

**RESEARCH AND ACADEMIC INSTITUTIONS**

| Stakeholder | Name of Nominee | What do they represent? | Stake in ITP and/or SEA | Knowledge of Transport Sector Issues | Ability to Influence Outcome | Communication Strategy Level 1,2, 3 or 4 | |
|---|---|---|---|---|---|---|---|
| Kwame Nkurumah University of Science & Technology – Planning Department | | Academia / research | comment on scenarios | H | L | 4 | |
| Building and Road Research Institute | | Academia / research | Comment on scenarios | H | L | 4 | |
| Centre for Remote Sensing and Geographic Information Services, Univ. of Ghana, Legon | Executive Director (Dr. Foster Mensah) 0243352468 | Academia / research | Comment on scenarios | | | | |
| ISSER, Univ. of Ghana, Legon | | Academia / research | Comment on scenarios | | | | |

# Appendix C Other Stakeholder Consultations

**NOTES ON FOCUS GROUP DISCUSSION WITH DEVELOPMENT PARTNERS HELD AT THE DEPARTMENT OF FEEDER ROADS CONFERENCE ROOM ON TUESDAY 21ST JULY, 2009 AT 10 AM.**

| NAME | ORGANIZATION | DESIGNATION | EMAIL |
|---|---|---|---|
| Arundhati Inamdar-Willetts | Mott Macdonald | SEA Team Leader | |
| James Annorbah-Sarpei | MDC | SEA Team Member | |
| Evans Darko-Mensa | MDC | SEA Team Member | |
| Raphael Annorbah-Sarpei | MDC | SEA Team Assistant | |
| Alan Gilham | EGIS/BCEOM | ITP Team Leader | |
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| John .K. Richardson | World Bank Ghana | Transport Specialist | |
| Eric .A. Amoako | Department of Urban Roads | Senior Engineer | |
| Willem Roodhart | EU Delegation | Programme officer | Willem.roodhart@ec.europa.eu |
| Sean Doolan | NL Embassy | Climate Change Adviser | |
| Christopher Nuoyel | JICA Ghana | Snr. Programme officer | |

The meeting was attended by four development partner organisations (JICA, NETHERLANDS, EU and WORLD BANK) and the focal persons from the road agencies and EPA. The team leader for the ITP also attended.

The team leader for the SEA of the ITP made a 20minutes presentation after which the ITP team leader fed in comments to clarify the links between the projects and the expected outcomes.
The following issues and comments were raised:

1. It was suggested to the SEA team to incorporate issues of adaptation to climate change. A reference document "adaptation strategy for Ghana" is available at the EPA to guide this input.

2. The SEA team was refered to the detailed institutional analysis done on the transport sector during the SEA of the transport policy. The presentation made did not have much on institutional analysis. The SEA team said that they have done some institutional analysis which will be presented in their scoping report

3. The focal person from EPA asked after the programme for the steering committee.

4. The meeting raised the issue of the involvement of political parties in the preparation some these projects to ensure continuity when there is change of government. The meeting was

informed there will be a meeting with the parliamentary select committee on transport, it was suggested the general secretaries of the parties be invited into this forum

5. The two teams were asked to meet and harmonize their consultative meetings with stakeholders to avoid repetitive meetings

6. The extensive stakeholder consultation of the National Transport Policy was suggested to be a guide for this process as well

7. The DPs were made aware that the manner in which they contract related projects sometimes makes it difficult to harmonize

8. The SEA consultants were asked to consider compound matrix which adds the poverty dimension to the analysis since transport is closely linked with poverty

9. The ITP team said they are expecting the SEA team to identify all the key environmental issues to feed into the ITP process before mid August by which time they would be developing the various scenarios

10. Reference was also made to a study made by the DFID on the northern region which could also inform the process.

11. The EPA requested if they could have a presentation on the model the ITP team is using. The ITP model expert is out of the country and would be back in August. The team leader however briefed on the general inputs and outputs from the model

12. The ITP consultant's attention was drawn to the areas that have not yet opened up hence have no OD data for their use, it was suggested that, there should be ways of including these areas in the model to ensure that they are not left out in the development of transport infrastructure for the country.

**NOTES ON FOCUS GROUP DISCUSSION WITH GENDER INTEREST GROUPS HELD ON WEDNESDAY 22nd JULY, 2009 AT 10 AM AT THE MDC/MOTT MACDONALD PROJECT OFFICES, EAST LEGON.**

**List of Participants**

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|---|---|---|---|
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The following issues were raised and comments made:

1. There are three key levels at which women interact with the transport sector:
   - Decision making level- from the conceptualizations stage to planning and implantation. Women should be involved in the process, since understanding the needs of women will help to bring out the best system of transport means.
   - Work load. The amount of work done by women especially in rural areas and particularly in the agricultural sector. Women are the main producers and their access to markets is very important. So rural and agricultural areas need a good transport system to help them transport agricultural produce from the farms. A good transport system will reduce burden on women, since they will not have to spend as much time and energy getting to markets (and other social services).
   - Access to resources and opportunities. Transport projects generate opportunities to earn income, eg jobs for the women who reside in the catchment areas of the project. This in the end helps the economic status of these women.
2. Road, rail and water are essential to these women. Much of the agricultural produce is produced in the northern and Brong Ahafo Region. Food crops grown in these areas go waste due to lack of reliable and affordable transportation. This is reflected in the cost of commodities – producers pay to clear their produce at road blocks, they have to make up for produce that spoils during the long delays and long journeys caused by unreliable transport and the frequent harassment by police.
3. Significant recognition is not given to the transport sector especially transport system in the northern part of the country which is the food basket of the economy.
4. The transport route in the Eastern corridors of Ghana is by far shortest means to the northern part of the country but the transport system is in very poor condition, and it therefore takes longer to go this way. This makes it difficult for these women to use it.
5. Collection points for agricultural produce should be created in the rural areas, so that women can take their produce to these centres, instead of having to travel all the way to the cities.
6. Women are the major users of water transport. However the water transport system in Ghana is not well developed and the existing one is not safe.
7. Water transport (especially in Volta Lake) is also used for transporting bulk goods, but again the system is unreliable and unsafe.

8. Trunk roads should be placed outside communities, and feeder roads should be developed to connect communities to the trunk roads. That will help to develop a comprehensive road network.
9. The railway system should be improved and its operations expanded. This will help reduce the traffic congestion and over population in Accra and other urban centre, since the population would not have to necessarily, live in the urban areas.
10. Bulk transport by rail should be considered for agricultural produce such as cassava and maize. This would take some of the heavy trucks off the roads, and make them safer.
11. Rail is the preferred means of transport for physically challenged people because it is more comfortable for them and relatively cheap.
12. Regulations for the transport sector should be enforced as this will enhance safety on the roads and waterways.
13. The majority of women use public transport. A comprehensive public transport and a non motorized transport system should be prioritized. This will also to help reduce greenhouse gas emissions
14. Public transport means are very uncomfortable for women and the physically challenged. Entry into the vehicles (such as buses and boats) is not easy.
15. Access to transport facilities is difficult for physically challenged – drivers and the public are not sensitive to their disabilities.
16. A good transport sector will help in the reduction of poverty, health related issues and social vices on our highways. It will generate opportunities for income generation, for example water vending.
17. The poor economic situation in the northern regions is also causing migration to already saturated urban areas.
18. The women's burden has implications on their health – head loading and walking for long distances.
19. Delays at border crossings, and places where trucks stop, have lead to promiscuous behaviour, and is impacting on the spread of STD/HIV/AIDS.
20. Trunk roads should have amenities / rest stops, to enhance road safety.
21. Women should be trained to take up jobs in the transport sector.
22. Data collection is very poor.
23. There should be good linkages between the transport sector and all the other sectors of the economy.
24. The transport plan should be looking at long term benefits.

# Appendix D Digitised Maps

Map 1 Transportation Network of Ghana

Map 2 Rainfall Distribution of Ghana

Map 3 Ecological Zones of Ghana

Map 4 Surface Water Resources of Ghana

Map 5 Forests and Protected Areas in Ghana

Map 6 Land Use Map of Ghana

Map 7 Population Density Distribution of Ghana