SFG1867

Addis Ababa City Road and Transport Bureau

ENVIRONMENTAL AND SOCIAL MANAGEMENT FRAMEWORK

ETHIOPIA TRANSPORT SYSTEMS IMPROVEMENT PROJECT – TRANSIP

(Final Draft)

Addis Ababa, February 2016

Executive Summary

I. Background and purpose of TRANSIP

Addis Ababa was established in 1887 by Emperor Menelik II and Empress Taytu. The City is located in the middle of Ethiopia, on a 2400-meter high plateau at the foot of Mount Entoto, with nearly a quarter of the City area located on relatively steep slope area. Its total area extends about 540 square kilometres, and is divided into 10 sub-cities and 116 woredas for administrative purpose. Since its establishment, Addis Ababa has undergone many changes in terms of its size and demographics, its finance and economic structure, its physical and spatial organization. During the period of the present Government (1991till present) where a robust private sector has been allowed to emerge, the city's population has grown by more than 80 percent, the total built up area has increased by at least 25 percent, the city's economy has been growing by double digits, and more infrastructure and housing development had been implemented. These large infrastructure investments in road construction had accelerated the process of change. Condominium housing in more than a hundred sites in the City, large residential housing construction by private real estate developers, and the booming of the construction of commercial high-rise buildings all have been influential in reshaping the spatial organization and productivity of economic activities.

Lack of adequate walking facilities along the roads coupled with inefficient traffic control and management systems have led to poor safety conditions and frequent traffic accidents in the City. It is estimated that pedestrians constitute more than 55% of the trip generated in the City. Among the main reasons for the high level of traffic accidents in the City is the lack of proper traffic control and management system, along with a poor pedestrian friendly transportation network. Available information indicates that about 64 people die per 10,000 vehicles annually on Ethiopian roads, which is comparatively high by international standards.

These growing externalities make the transport system economically unsustainable and expensive to society. Studies indicate that the main challenges are, among others: (a) very limited traffic management, exemplified by the severely inadequate number of traffic control signals, and the lack of a central traffic control system; (b) pedestrian safety concerns and high accident rates; (c) ineffective planning, management and oversight of

the city's public transport network (notwithstanding some important recent initiatives to develop a mass transport network); and (d) inadequate institutional capacity underlying the above concerns and lack of coordination among different agencies shaping the city's transport system and the land use patterns.

Currently there are significant deficiencies in the driver licensing and vehicle registration systems in Ethiopia, limiting the effectiveness of enhanced transport systems management. The high accident rates witnessed in the country also raises concerns on the quality of training and testing systems. Some of the challenges include: lack of adequate driver and vehicle registry; record management and information exchange platform, weak means of enforcing traffic laws/rules; and sub-standard quality of service accessibility and efficiency of public freight transport resulting from poor management and lack of good governance.

In light of the above explained challenges, the TRANSIP is primarily intended to alleviate the current transport challenges the city of Addis Ababa has faced and to improve and transform the transport systems management in Ethiopia. It is assumed that the project will create a platform to learn lessons and develop practices for the development of the transportation system through the coordinated and synergetic work of each stakeholder.

TRANSIP comprises three main components which consist of several sub-components and sub projects. The physical infrastructure works of the TRANSIP project are entirely captured by Component A and B. The remaining Component-C is primarily focused on the development and installation of Integrated Transport and Management Information System based on existing ICT infrastructures. Most of the project subcomponents found under Component-A & B of the TRANSIP will be implemented in Addis Ababa.

The Addis Ababa City administration has proposed for the improvement of five road corridors with the complete street concept which envisaged installation works of drainage facilities, roadside furniture, street lighting, strengthening and replacement of pavements, and construction of new sideway walks and/ or widening the existing walkways within the right of way. In general, it is envisioned that the transport system of Addis Ababa will be reliable, accessible, affordable, comfortable, and safe.

This Environmental and Social Management Framework (ESMF) is focusing on Component A and B of the TRANSIP and their sub-components along with the sub-projects. TRANSIP sub-projects are going to be decided at later stages by the program implementers.

II. Objectives of the Environmental and Social Management Framework (ESMF)

The objectives of the ESMF are to ensure that environmental and social management is integrated into the development and implementation cycle of individual TRANSIP subprojects. The ESMF is intended to serve as a practical tool to guide identification and mitigation of potential environmental and social impacts of proposed TRANSIP sub projects. The ESMF has been prepared in compliance with the Bank's OP 4.01 and relevant Ethiopian policies and laws on environmental assessment. It identifies the safeguard policies triggered by the project, the screening criteria of sub-projects, the likely environmental and social impacts for the sub-projects and the mitigation measures to prevent the identified risks, assessment of the institutional capacity of the implementing agency and measures for capacity building, and an estimate of the budget needed for the implementation of the ESMF.

The ESMF provides general guidance to project implementers on the implementation of social and environmental safeguard principles, requirements and associated procedures that should be accomplished prior to the commencement of the sub-projects on the ground. It provides a general framework through which sub-projects to be implemented by the TRANSIP are required to get through, in order to fulfil the applicable National and World Bank safeguard requirements.

The ESMF preparation involved document reviews and consultations with key stakeholders in the environment sector, in addition to the lead road sector institutions. Key stakeholders consulted included the Federal Road Transport Authority, Addis Ababa City Road Transport Bureau, Addis Ababa EPA, and the Ministry of Environment, Forest and Climate Change.

III. Implementation Arrangements

The TRANSIP components have contained activities that involve the Federal Government and the City Administration of Addis Ababa. The implementation arrangements have therefore been designed to involve two institutions, the Federal Road Transport Authority on behalf of the Ministry of Transport and the Addis Ababa City Road and Transport Bureau (AACRTB) on behalf of the Addis Ababa City Administration. Whereas components-A and B of the TRANSIP project will be implemented by Addis Ababa City Road Transport Bureau, Component C will be implemented by the Federal Road Transport Authority. Each implementing agency will be responsible for fiduciary functions related to their respective activities, including ensuring compliance with National and World Bank environmental and social safeguards policies.

The project implementation arrangement at the Addis Ababa city level consists of three tier structure that consists of Addis Ababa City Road and Transport Bureau (AACRTB) as lead implementing agency, a steering committee and Project Implementation Unit (PIU). The steering committee, which is chaired by the head of AACRTB, provides high level guidance for implementation of the TRANSIP projects. Members of the steering committee are high level officials of the TRANSIP Component-A & B beneficiary institutions (AACRTB, AACRA, TPMO, ACBSE, PFTA, TMA, Addis Ababa police Commission and AALDMB). The overall regular management and coordination of the TRANSIP project will be supported by a Project Implementation Unit (PIU) reporting to the steering committee. The Transport Programs Management Office (TPMO) co-chairs the steering committee and shall overlook the day-to-day activity and performance of the PIU. AACRA is delegated by AACRTB to administer the financial and procurement management of the TRANSIP Component-A & B with the technical inputs delivered from PIU. The beneficiary/stakeholder institutions participating in the TRANSIP at city level have areas of mandated responsibility that enables them to be engaged on the TRANSIP implementation.

On the other hand, the Federal Transport Authority at national level will be the main project implementing agency for Component-C of the TRANSIP. The project implementation arrangement at federal level consists of three tier structure that is: an executive committee, a steering committee and project implementation unit (PIU).

IV. Relevant Ethiopian policies and laws on environmental assessment

The applicable Ethiopian policies and laws on environmental assessment as it applies to the TRANSIP are:

The Constitution of Ethiopia (article 43, 44 and 92 of the Constitution), Environmental Policy of Ethiopia, Growth and Transformation Plan (GTP 2), Ethiopian Cities Sustainable Prosperity Initiative (ECPI), environmental proclamations (Environmental Impact Assessment Proclamation 299/2002, Environmental Pollution Control Proclamation 300/2002, Solid Waste Management Proclamation 513/2007), Research and Conservation of Cultural Heritage Public Health Proclamation No 209/2000: Proclamation, The Labour law Proclamation 377/2003, Prevention of Industrial Pollution Regulation 159/2008,Expropriation of landholding for Public Purposes and Payment of compensation Proclamation No 455/2005, and Council of Minister Regulation No 135/2007 as well as Environmental guidelines and standards.

In case of Addis Ababa, AACG Environmental Impact Assessment Regulation 21/2006 is also applicable.

V. World Bank Safeguard Policies

The applicable World Bank safeguard policies as it applies to the TRANSIP project are Environmental Assessment OP/BP 4.01, Cultural Property (OP 4.11) and Involuntary Resettlement OP /BP 4.12.

The environmental and social risks associated with the infrastructure works can be, but will in most cases, not be significant. It is therefore most of the TRANSIP sub-projects may fall into Category B or C. The ESMF checklist is designed to identify these potential impacts, and direct the implementing agency (PIU) to practical ways of avoiding or mitigating them. The screening process that will determine whether identified TRANSIP sub-projects will require an ESIA or not, should only be carried on sub-projects that are approved by the steering committee or the implementing agency. ESIAs and Environmental Management Plans (ESMP) will be prepared as necessary, in line with the ESMF.

Addis Ababa City has many historical, religious, and cultural properties that are of significance at National and City level and registered by the City Administration Culture and Tourism Bureau. TRANSIP sub projects will undergo screening and are then subject to the provisions of OP 4.11. Procedures will be incorporated into civil works supervision plan, and buffer zones will be created to avoid damage to cultural resources.

Involuntary resettlement can be triggered in situations involving involuntary taking of land and involuntary restrictions of access to legally designated parks and protected areas. The World Bank policy applies to the involuntary restriction of access to legally designated parks and protected areas resulting in adverse impacts on the livelihoods of the displaced persons. For this purpose a Resettlement Policy Framework (RPF) has been prepared in a separate document and it forms an integral part of the overall Environmental and Social Management Framework for the TRANSIP. Resettlement Action Plans (RAPs) will be prepared as necessary, in line with the RPF, once the exact nature and locations of TRANSIP subprojects have been identified. In such events if there are differences between national legislation and OP 4.12, the provision of the later will prevail during project implementation.

VI. Potential Environmental and Social Impacts

The TRANSIP subprojects are expected to result in significant social benefits and positive environmental impacts. The potential environmental and social benefits of the TRANSIP are: employment generation, accessible and affordable transport, fuel economy, various economic benefits, and reduced pollution and improve welfare of the city residents in many ways.

Potential negative environmental impacts anticipated for TRANSIP are not significant and will be of temporary nature occurring during construction of infrastructures including dust, noise, waste generation, , disruption to traffic, utility and movement, health and safety, used oil and lubricants, depletion and pollution of surface-and ground-water resources,; and would be mitigated by implementing appropriate mitigation measures as identified in the ESMF. Environmental and Social Impact Mitigation and Monitoring Checklists are developed as part of the ESMF.

VII. Process and procedures of the ESMF

The proposed TRANSIP ESMF process and the procedural steps to be applied for identifying and managing environmental and social issues during subproject screening and approval are:

- **Preparation**: during this stage ESMF requirements shall be reviewed by stakeholders and implementers, contact established with the Regional Environmental Protection Authority by providing the necessary documents and information, interested and affected communities will be identified and meeting organized. This preparation stage is an important exercise in creating a common understanding and awareness of the procedures involved among the key actors in the implementation of the ESMF.
- **Screening:** This determines whether or not a project requires ESIA and the level at which the assessment should occur. The environment and social safeguard specialists in the PIU initiates the process by completing the form contained in Annex A. The aim of the screening form in Annex A is to assist in identifying potential impacts based on field investigations in the area of the subproject site. The outcome of environmental and social screening exercise will be classifying the proposed TRANSIP subproject into one of Category B or C. Sub projects that may fall under Category A will not be eligible for financing by TRANSIP and will be subjected to redesign, re-routing or resizing for avoiding adverse and irreversible impacts.. The completed screening report will be submitted to the AAEPA for review and approval.
- **Preliminary ESIA preparation and submission:** Category B subprojects will be subject to a limited Environmental and Social Impact Assessment to prepare an ESMP. TRANSIP subprojects that are screened and approved by AAEPA as Category B are required to prepare a preliminary ESIA report, that could be carried out by the PIU with the help of an independent consultant. For Category C projects, the application of Environmental Guideline for construction contractors will be important and no further action is required.
- **Review and Decision:** The Addis Ababa Regional Environmental Protection Authority will review the preliminary ESIA and ESMP submitted to it by the implementing agency/PIU/. The purpose of review is to examine and determine whether the preliminary ESIA and ESMP are an adequate assessment of the environmental effects of the TRANSIP subproject under consideration and of sufficient relevance and quality for decision-making. ***After the ESIA is reviewed and approved by the regional EPA, it should be submitted to the World Bank review and clearance.***
- **Disclosure:** In compliance with World Bank guidelines and in the ESIA proclamation, before a TRANSIP subproject ESIA is approved, the applicable documents (ESIA, ESMP, CRMP and/or RAP) must be made available for public review at a place accessible to local people (e.g. at a local government office, kebele council, regional bureaus, and at the Regional EPA), and in a form, manner, and language they can understand.

- **Implementation & Supervision:** When approval has been given to the preliminary ESIA /ESMP, CRMP, ARAP or RAP implementation of mitigation measures and its systemic follow-up is needed for the sub-project. Supervision and compliance monitoring comprises on site-inspection of construction activities to verify that measures identified in the ESMP, CRMP and/or RAP and included in the contract clauses agreed with contractors are being implemented. Monitoring the compliance of TRANSIP subproject implementation with the mitigation measures set out in its ESMP, CRMP and/or RAP will be carried out internally and externally. The implementation of the recommended mitigating measures will also be monitored externally by the Addis Ababa Environmental Protection Authority.
- **Annual Environmental Reports**: An annual environmental report must be compiled and submitted by the PIU to AACRTB and the Steering Committee for submission to the Regional EPA and World Bank for review.
- **Annual Reviews:** ESMF implementation will also be supported by conducting annual environmental and social performance audit (including audit of implementation of ESMPs, CRMPs, RAPs and ARAPs) that will be carried out by a third party. The third-party annual environmental and social performance audits will be conducted on the TRANSIP to evaluate the overall implementation of the ESMF and the Project.

VIII. Training and Capacity Building

There is a need to fill in the capacity gaps identified to exist in the implementer and stakeholders and institutions that will involve in the TRANSIP ESMF and RPF implementation. One of the capacity building areas sought for by the implementing agency and different stakeholders involved in the implementation of the TRANSIP is the provision of training. The type of trainings necessary to these various target groups will vary and this could be in form of sensitization, awareness raising, and technical training on ESMF and RPF. Proposed Environmental Management Topics are incorporated in this ESMF.

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ABBREVIATIONS

ARAP	Abbreviated Resettlement Action Plan
AACRA	Addis Ababa City Road Authority
AACRTB	Addis Ababa City Road and Transport Bureau
ACBSE	Anbessa City Bus Service Enterprise
AALDMB	Addis Ababa Land Development and Management Bureau
BoLSA	Bureau of Labour and Social Affairs
BP	Bank Procedures (World Bank)
BOWCYA	Bureau of Women, Children and Youth Affair
CRMP	Cultural Resources Management Plan
ESIA	Environmental Impact Assessment
EMP	Environmental Management Plan
EPA	Environmental Protection Authority
ERA	Ethiopian Roads Authority
ESIA	Environmental and Social Impact Assessment
ESMF	Environmental and Social Management Framework
ETB	Ethiopian Birr
GoE	Government of Ethiopia
GP	Good Practice (World Bank)
IDA	International Development Association

TRANSIP	Transport Systems Improvement Project
FEMSEDA	Federal Micro and Small Enterprises Development Agency
MEFCC	Ministry of Environment, Forest and Climate Change
MOFED	Ministry of Finance and Economic Development
MUDHCo	Ministry of Urban Development, Housing and Construction
NGO	Non-Governmental organization
O&M	Operation and Maintenance
OM	Operational Manual
OP	Operational Policy (World Bank)
PAPs	Project Affected Persons
PDO	Project Development Objective
PFTA	Public and Freight Transport Authority
PIP	Project Implementation Plan
PSCAP	Public Sector Capacity Program
PIU	Project Implementation Unit
RAP	Resettlement Action Plan
REPA	Regional Environmental Protection Authority
RPF	Resettlement Policy Framework
SDPRP	Sustainable Development and Poverty Reduction Programme
TMA	Traffic Management Authority
TPMO	Transport Programs Management Office
ToR	Terms of Reference

1 INTRODUCTION

The Government of Ethiopia has been working with the World Bank to design a Transport Systems Improvement Project (TRASIP).. The proposed project will be funded by the International Development Association (IDA) with an amount in the order of 300million USD. The project will have two fundamental pillars---the transport planning and transport system development. The transport planning pillar is set to craft the overall transport development strategy of Addis Ababa City, whereby there will be a clear vision and its implementation strategy to develop sustainable urban

transport system over the coming ten to 20 years. The second major pillar of the project is transport system development, which comprises of public transport improvement, traffic management, and capacity development program.

This project corresponds with the central features of the GoE's Growth and Transformation Plan-I which is going to be continued by GTP-II. Under the Transport services section of GTP-I, the GoE planned to restructure and operationally improve the transport sub-sector so that transportation services are more flexible, competent and provide a more efficient service. The GTP also acknowledges the growing pressure on the existing urban transport systems driven by increasing economic activities in cities such as Addis Ababa and it planned to address the associated requirements for the development of better transport systems and services based on efficient urban land utilization and development planning as well as analysis of existing and future traffic density patterns.

The main objectives of the project are to improve accessibility and safety performance in Addis Ababa and effectiveness and efficiency of vehicle and drivers' license system throughout Ethiopia. The proposed project is expected to improve transport efficiency on the urban arterial system and selected road corridors in Addis Ababa, improve pedestrian safety and mobility, improve institutional capacity in the urban transport sub-sector; and installing an IT infrastructure system with unified management systems across the areas of driver and vehicle registry, vehicle inspection and regulation, driver training quality control centres, and penalty management across the country. The project is designed to fund a number of subprojects that will be identified and planned by the implementing agencies.
This document provides an Environmental and Social Management Framework (ESMF) for the TRANSIP. The ESMF document is prepared in line with the environmental and social safeguard policies of the World Bank and the GoE's environmental policies and legislations. It is prepared with a particular focus on safeguard policies triggered by the Project i.e. OP 4.01 *Environmental Assessment*, OP 4.11 *Physical Cultural Resources*, and OP 4.12 *Involuntary Resettlement*.

The ESMF establishes a unified process for addressing all environmental and social safeguards issues on subprojects from its design to implementation. The specific location/site, size and activities of the TRANSIP sub-projects are going to be decided at later stages by the project

implementers. The present ESMF is intended to provide general guidance to project implementers on the implementation of social and environmental safeguard principles, requirements and associated procedures that should be accomplished prior to the commencement of the sub-projects on the ground. It provides a general framework through which sub-projects to be implemented by the TRANSIP project are required to get through, in order to fulfil the applicable National and World Bank safeguard requirements.

Whereas a brief outline of the TRANSIP project with emphasis on component A and B is described in chapter two, organizational responsibilities for implementation of the ESMF are outlined in chapter three. The review of applicable National legislations and World Bank policies to the present ESMF are presented in chapter four. The essential procedures and process of the ESMF Implementation are presented in chapter five. The subsequent chapters also outline the guidance for environmental mitigation and management, capacity building and training, Environmental monitoring as well as budget for ESMF implementation.

1.1 PURPOSE AND OBJECTIVES OF THE ESMF

The purpose of preparing the ESMF in the implementation of the TRANSIP is to adapt for the Addis Ababa City Administration and the implementing agencies a framework that will facilitate compliance with relevant National, the World Bank and other safeguard requirements for sub-projects under the TRANSIP in a coherent manner. The ESMF is prepared to serve as a safeguard framework to examine the environmental and social impacts of the TRANSIP sub-projects to be implemented in Addis Ababa City.

Apart from the proposed five road corridors selected for development under this project, the specific sites of the sub-projects to be implemented within the selected five road corridors and the other infrastructure sites are not identified at this stage and its potential impacts cannot be fully determined until such details as specific design, location, size and activities of the sub-projects are determined. Thus, the ESMF outlines the principles and procedures to be followed to screen the TRANSIP sub-projects against any potential environmental and social impacts at specific site and city level. The ESMF document also provide guidance in designing appropriate measures and plans to reduce, mitigate and/or offset adverse impacts and enhance positive outcomes. The overall objective and purpose of the TRANSIP ESMF can be summarized as follows.

- Assessment of potential adverse environmental and social issues or impacts commonly associated with road project activities and the ways to avoid, minimize or mitigate them;
- To establish clear procedures and methodologies for the environmental and social assessment, review, approval and implementation of EMPs of sub-projects to be financed under the TRANSIP;
- To specify appropriate roles and responsibilities, and outline the necessary reporting procedures, for managing and monitoring environmental and social concerns related to TRANSIP;
- To determine the training, capacity building and technical assistance needed to successfully implement the provisions of the ESMF; and
- To provide practical information resources for implementing the ESMF.

The ESMF is complemented by an RPF that establishes the Project resettlement and compensation principles and implementation arrangements.

1.2 METHODOLOGY

The methodology adopted for preparing the TRANSIP ESMF is briefly described below.

a. Review of relevant legislations, policies and other documents

The ESMF preparation process involved conducting review of the existing national legislations, policies, guidelines and institutional arrangements to ensure incorporation of updates, if any. The ESMF toolkit and template of the World Bank (February, 2008) was reviewed and applied for the preparation of the current ESMF. Moreover, various related documents such as road sector ESMFs were consulted in the review process. The Mission Aide Memoire Discussion paper and other similar project concept papers were also reviewed.

b. Consultation and field Observations

As part of the ESMF preparation process, two consultation meetings were conducted in Addis Ababa targeting two different groups of consultees. The first consultation meeting was held in Yordanos Hotel on 18 December 2015 and its primary aim was to carry out stakeholder consultations. In

this consultation meeting representatives of important stakeholders such as project beneficiary institutions and regulatory bodies such as the Addis Ababa EPA as well as Bureau of labour and social affairs were found. The second consultation meeting was held in Kaleb Hotel on 24 December 2015 and its aim was to conduct community consultations. In this consultation meeting representatives of different community groups, local kebelle authorities, and other representatives from the private sector associations were found. The consultation meetings were attended by more than 50 participants.

The consultations were focused on providing information and receiving the concerns and opinions of the participants regarding the overall TRANSIP objectives, its main and sub-components and in particular Component A and B for which the ESMF was prepared. Presentation of the TRANSIP subproject types and the associated draft ESMF procedures were made to the stakeholder and community consultation participants and discussions were conducted to identify their concerns, opinions, institutional capacity gaps and other constraints to implement the procedures. Interviews were also conducted with sector bureaus and agencies involved in the implementation of the TRANSIP project.

Fig 1: Showing stakeholder consultation meeting carried in Yordanos Hotel, Addis Ababa

Fig 2: Showing community and local authority consultation meeting carried in Kaleb Hotel, Addis Ababa

The ESMF preparation also involved consultation with key stakeholders in the environment sector, in addition to the lead road sector institutions. Key stakeholders consulted included the Federal Road Transport Authority, Addis Ababa City Road Transport Bureau, Addis Ababa EPA, and the Ministry of Environment; Forest; and Climate Change.

1.3 BACKGROUND AND PURPOSE OF THE TRANSIP

Addis Ababa, the capital city of Ethiopia, is a vibrant and fast changing urban metropolitan city, with an estimated population of more than 2,739,551 (CSA,2007). The relatively rapid economic growth in the City in recent years, has resulted in serious challenges and stresses to the socio-economic infrastructure, including on its transportation network. The number of registered motor vehicles in Addis Ababa is not that large, even by Sub-Sahara African standard. In the mid of 2015, the number of registered vehicles in Addis Ababa was about 5000, 0000 .It is also estimated that Addis Ababa represents more than 60% of the vehicles registered in the entire country. Despite that and the great success stories with the unprecedented expansion of the road and highway networks in the City in recent years, frequent and long congestion become the daily experience and face of the City. The growing usage of motorized private vehicles coupled with the increasing congestion levels, also leads to increased fuel consumption and traffic costs. The urban transport network of Addis Ababa is therefore poised to experience significant new stresses. As a result the traffic congestion, traffic accidents, and air pollution caused by the gaseous emissions has increased and it appears to be continuing to raise.

Lack of adequate walking facilities along the roads coupled with inefficient traffic control and management systems have led to poor safety conditions and frequent traffic accidents in the City. It is estimated that pedestrians constitute more than 55% of the trip generated in the City. Among the main reasons for the high level of traffic accidents in the City is the lack of proper traffic control and management system, along with a poor pedestrian friendly transportation network. Available information indicates that about 64 people die per 10,000 vehicles annually on Ethiopian roads, which is comparatively high by international standards.

These growing externalities make the transport system economically unsustainable and expensive to society. Studies indicate that the main challenges are, among others: (a) very limited traffic management, exemplified by the severely inadequate number of traffic control signals, and the lack of a central traffic control system; (b) pedestrian safety concerns and high accident rates; (c) ineffective planning, management and oversight of the city's public transport network (notwithstanding some important recent initiatives to develop a mass transport network); and (d) inadequate institutional capacity underlying the above concerns and lack of coordination among different agencies involved in the city's transport system and the land use patterns.

Currently there are significant deficiencies in the driver licensing and vehicle registration systems in Ethiopia, limiting the effectiveness of enhanced transport systems management. The high accident rates witnessed in the country also raises concerns on the quality of training and testing systems. Some of the challenges include: lack of adequate driver and vehicle registry; record management and information exchange platform , weak means of enforcing traffic laws/rules; and sub-standard quality of service accessibility and efficiency of public freight transport resulting from poor management and lack of good governance.

In light of the above explained challenges, the TRANSIP is primarily intended to alleviate the current transport challenges the city of Addis Ababa has faced and to improve and transform the transport systems management in Ethiopia. It is assumed that the project will create a platform to learn lessons and develop practices for the development of the transportation system through the coordinated and synergetic work of each stakeholder.

The range of project components and sub-components initiated in the TRANSIP are so broad. The TRANSIP project will address two fundamental pillars---the transport planning and transport system development. The transport planning pillar is set to craft the overall transport development strategy of the City, whereby there will have a clear vision and its implementation strategy to develop sustainable urban transport system over the coming ten to 20 years. The planning deals with two notions; the development of a comprehensive transport master plan and the development of a transit oriented development program and their implementation strategies. The second major pillar of the World Bank financed projects is transport system development, which comprises of public transport improvement, traffic management, and capacity development program. In general, it is envisioned that the transport system of Addis Ababa will be reliable, accessible, affordable, comfortable, and safe.

1.4 COMPONENTS OF TRANSIP

The proposed TRANSIP will comprise three main components which consist of several sub-components.\ :

1. Component A: Improve the Traffic Signal System, Road and Pedestrian Safety, Parking Management, Traffic Enforcement, Public Transport Systems, and Transportation Institutions in the city of Addis Ababa

2. Component B: Improve Integrated Urban Planning and Transport; and Institutional strengthening; and

3. Component C: Develop an Integrated Transport and Management Information System for Driver Licensing, Vehicle Registration and Inspection, and Penalty Payment and Institutional Strengthening

Out of the three components Component A involves physical works, for which this ESMF is prepared. The Addis Ababa City administration has proposed 25 intersections and five Road corridors for improvement whose envisaged works will involve installation of drainage facilities, roadside furniture, street lighting, strengthening and replacement of pavements, and construction of new sideway walks and/ or widening the existing walkways within the right of way. Most of these and the other additional physical infrastructure works are entirely captured by Component A of the

TRANSIP project. The remaining Components, Band -C are primarily focused on capacity building and system development, and hence do not involve physical works. system.

The proposed project will comprise the following components

Component A: Improve the Traffic Signal System, Road and Pedestrian Safety, Parking Management, Traffic Enforcement, Public Transport Systems, and Transportation Institutions in the city of Addis Ababa This component will involve the following four sub-components:

Sub-component 1: Support to the New Traffic Management Agency to Improve the Traffic Signal System, Road and Pedestrian Safety, Parking Management and Traffic Enforcement. The sub-component will undertake the following activities:

i. Expansion of the existing traffic signal system, central control of this system, and associated civil works improvements at intersections to improve traffic flow and enhance pedestrian safety; and designing comprehensive traffic management improvements to selected complete streets to improve traffic flow and pedestrian safety;
ii. Development of a city-wide parking strategy and implementation of a targeted paid on-street and off-street parking program to better manage current poor parking conditions;
iii. Undertaking traffic management studies to improve traffic conditions as conditions evolve; and carrying out traffic studies and provision of technical assistance and advisory services;
iv. Building the capacity of the proposed Traffic Management Agency to carry out its assigned responsibilities, especially in designing and implementing appropriate traffic management measures and training;
v. Carrying out traffic studies and provision of technical assistance and advisory services;
vi. Enhancing traffic enforcement and traffic safety through provision of appropriate equipment and traffic enforcement training.

Sub-component 2: Support to Addis Ababa City Roads Authority (AACRA) to Improve Conditions of Road Infrastructure and Pedestrians Facilities. This sub-component will involve the following sub-project activities:

i. Implementing comprehensive improvements to selected complete streets using context-sensitive design approaches to enhance traffic conditions and pedestrian amenities and safety. This will be done through a range of measures including, inter-alia, pavement improvements, drainage improvements, traffic management measures, sidewalk provision or upgrading, street lighting, provision of bus stops and bus bays, and parking management measures within the Right of Way (RoW);
ii. Developing and implementing a pedestrian safety and community connectivity at selected locations. Locations and specific interventions will be selected through detailed study. Overpasses may be considered where at-grade pedestrian crossings are not appropriate;
iii. Developing a citywide drainage master plan; and
iv. Institutional strengthening through a range of measures including advisory assistance on the following: (a) implementing improved asset management and pavement management systems, (b) developing an improved maintenance strategy and improved maintenance funding, (c) restructuring of AACRA and providing capacity building activities, (d) developing an improved road design manual and creating a road maintenance manual, (e) improving contract management and design; and (f) training.

Sub-component 3: Support to the New Public Transport and Freight Authority (PTFA) to Improve Traffic Oversight, and Public Transport Services and Systems. This sub-component will consist of:

i. Support for public transport planning and management as well as advisory assistance in establishing the proposed PTFA;
ii. Building the capacity of PTFA in public transport planning, management, regulation, and service contract management through advisory assistance and training;
iii. Assistance in planning and establishing an integrated public transport system including implementing regulatory reforms to rationalize the provision of public transport services, strengthen the management of public transport operations and support in streamlining the operations of minibus-taxi sector;
iv. Assistance in modernizing Anbessa Bus operations through support in improving management, business and operational information systems for improving the operation efficiency and management including designing and implementing an ITS and fare collection and bus network systems; and

v. Support in rehabilitating and improving operational conditions of Anbessa's vehicle maintenance workshops and depots and control center to all the systems.

vi. Institutional strengthening, capacity building and training for Anbessa.

Sub-component 4: Support to AACRTB and Transport Programs Management Office to Improve Planning

i. Building the capacity of AACRTB and TPMO to plan and oversee the implementation of urban transport reforms through training and provision of goods, services and technical assistance;

ii. Strengthening the capacity of TPMO staff to carry out its responsibilities, including monitoring and evaluation of the Project, and steering the preparation of future development initiatives; and

iii. Providing technical assistance in building project management capability.

Component B: Improve Integrated Urban Planning and Transport and Institutional strengthening. This component will involve supporting the Addis Ababa Land Development and Management Bureau (AALDMB) to develop Land Use and Transport Plans, and will include:

i. Carrying out studies on Transit-Oriented Developments (TOD) and preparing detailed plans for selected strategic TOD(s) as well as formulating the operation and management strategies and implementation plan for these TOD(s);

ii. Provision of advisory and technical assistance in enhancing the capacity in Metro area master planning including preparing selected Local Development Plans for strategic TOD areas consistent with the new Structural Plan; and

iii. Building the capacity of AALMDB in carrying out its functions including enhancing actual implementation and enforcement through provision advisory services, goods and training.

Component C: Develop an Integrated Transport and Management Information System for Driver Licensing, Vehicle Registration and Inspection, and Penalty Payment and Institutional Strengthening. This component will include support to the Federal Transport Authority and the Ministry of Transport (MoT), and includes the following activities: .

i. Setting up a system for re-registration of current drivers with ten fingerprints and replacement of existing driver's licenses with modern security enhanced driver's license documents;
ii. Setting up a system for re-registration of vehicles with vehicle chassis numbers and replacement of the existing vehicle registry documents by secure unified vehicle registration documents;
iii. Improving the quality driver training and testing;
iv. Design and installation of a driving school management solution;
v. Development and installation of vehicle inspection management solution;
vi. Development and installation of driver's penalty management system;
vii. Installation of police mobile solutions for driver and vehicle verification as well as penalty management and deployment of smartphone or mobile applications for verification of vehicles and managing penalties;
viii. Establishment of central help desk support solution;
ix. Power interruption solution;
x. Institutional strengthening, capacity building of FTA and training; and
xi. Support the Federal Ministry of Transport in: (i) development of a long-term program to improve skills for urban transport management through engaging with local universities in developing the corresponding curriculum, and supporting students in these programs on a pilot basis; (ii) developing an urban transport policy and investment program; and (iii) support in the implementation of institutional and policy reform in the provision of public transport.

It is important that subprojects should be adapted to local conditions and protect the environment. The subprojects to be selected are required to meet the following criteria:

- Communal benefits: The subprojects must benefit the community as whole.

- Community acceptance: The subprojects must be accepted and approved by the community. They should have active community support and commitment.
- Feasibility and sustainability: The subprojects must be feasible technically, socially and economically. They should be simple and manageable in implementation and also in on- going maintenance in order to be sustainable.
- Productive: The subprojects should create durable urban assets which should contribute to the urban development and to the reduction of poverty.
- Gender sensitivity: Priority should be given to subprojects that enable women to participate and increase access to productive assets.

A menu of the TRANSIP sub-projects is provided as guidance to the implementing institutions (Table 1).

Table 1: List of sub-projects under TRANSIP that involve physical works:

Sub project category	**Detailed infrastructure/service sub-project types included under TRANSIP menu**
Improvements to selected complete streets intersections and pedestrain footbridges (*civil works for the proposed comprehensive corridor improvements*).	Road and Pedestrian Safety, - Pavement improvements, - Strengthening and replacement of pavements in some sections - Installation of drainage facilities and improvements, - construction of new sidewalk or upgrading/widening - Installation of street lighting - provision of bus stops and bus bays (loading and

	unloading public transport passengers) - Pedestrian overpasses to enhance pedestrian safety and community connectivity - Installation of roadside furniture's - Walkways
Public Transport (Anbessa)	- Rehabilitating and improving Anbessa's vehicle maintenance workshops and depots.
Traffic Management and Control	- Construction of traffic control center and associated civil works. - Installation of Traffic Signal System at major intersections, signs and pavement markings, and signalized junctions; - Expansion of the existing traffic signal system and associated civil works improvements at intersections

The following subprojects will not be admissible as TRANSIP subprojects. These include:

- Subprojects in locations that are ecologically sensitive such as City Parks, wetlands, and other unique habitats.
- Subprojects located within a recognized Cultural heritage site, or World heritage sites
- Subprojects that involve the significant conversion or degradation of critical natural habitats;

1.5 TRANSIP TARGET AREAS

The main target city in which most of the project subcomponents found under Component-A & B of the TRANSIP will be implemented is Addis Ababa. The Addis Ababa City Administration has in particular proposed five main road corridors, 25 intersection and five footbridge locations where the complete street improvement and safety improvement works will be applied. The five road corridors selected for improvement mainly starts at the central urban core parts of Addis Ababa City (i.e. Arat Kilo & Piazza areas) and extends to the northern, eastern and central west parts of the city. Except for the road corridor that extends from Africa Avenue to British Embassy which lay on the eastern parts of the city, the

remaining road corridors start, finish or pass through the core urban centres of the city, namely Arat killo and piazza areas. The central sub city through which many of the selected road corridors start, finish or passes is Arada sub city and from there they extend to Gulele, Bole, Kirkos, Addis Ketema and Yeka sub cities. The list of the five proposed road corridors is shown in table 2.

In addition the installation of the 158 traffic light systems together with its central traffic control system will be established in Addis Ababa city. TRANSIP will also target cities found at Regional and zonal levels in the process of establishing a modern database system as well as Information Technology (IT) infrastructure for driver's license registry and management, vehicle registration and inspection, and penalty management for traffic rules offenders. However, it is intended that the IT infrastructures to be installed in the regional and zonal cities are going to use existing physical infrastructures in the cities and may not involve construction of new facilities to house the data bases and hence may not need to pass through ESMF/RPF procedures.

Table 2: List of selected road corridors for improvement-

No.	Description	Length(Km)
1	Arat Kilo - Ras Mekonnen, Degol -Abune Petros -Atekilt tera	3.15
2	Bole Brass Clinic- Urael – National Palace -Arat Kilo	6.48
3	Africa Street- Edna mall-Golagul-Denberewa- British Embassy	4.5
4	St Giorgis- Gojam Ber	3.65
5	Omer Semeter- Cathedral school -CSA- National Palace	2.42

Addis Ababa city being the city which is highly challenged by stresses on traffic flow and public transport network, it is included in this program as

the main target area for TRANSIP implementation. In addition construction activities will be carried out in 25 intersections and 5 foot bridges to improve traffic movement.

Fig 3: Partial view of the selected road corridors for improvement

1.6 ENVIRONMENTAL AND SOCIAL CONTEXT AND BASELINE CONDITIONS

Ethiopia is located between 3º and 15ºN latitude and 33º and 48ºE longitude and covers a land surface area (including water bodies) of 1,127,127 km². The country is currently divided into nine regional states and two City administrations. It is a country of great geographical and climatic diversity, which has given rise to many and varied ecological systems. Addis Ababa, the capital city of Ethiopia, is one of the two City Administrations found in the country having a total area of 54,000ha. It is located in the central highlands of Ethiopia at $9^0$38'N and $38^0$42'E with the lowest elevation of 2,326 masl in the southern periphery to the highest elevation of over 3000 masl in the entoto mountain, north of the city.

The rainfall pattern in Ethiopia is influenced by two rain-bearing wind systems, one bringing the monsoonal wind systems from the South Atlantic and the Indian Ocean and the winds from the Arabian Sea. The two wind systems alternate, causing different rainfall regimes in different parts of the country. The climate of Addis Ababa and its environs is characterized by four seasons. These are Bega (dry season from October-January), Kiremt (long rainy season from June to September), Belg (small rainy season from February - May) and Meher (from November to December). Addis Ababa is mainly characterized by Woina Dega (Temperate) climatic features.

The average temperature of Addis Ababa ranges between 17^0C and 22^0C, and the average minimum temperature ranging between 11^0C and 14^0C. The mean annual rainfall of Addis Ababa city is estimated at 1200mm, with the major rainy season occurring between June and September. The city possesses a mix of high land climate zone. The high elevation moderate temperatures year-round and the city's position near the equator mean that temperatures are very constant from month to month.

The main surface water resources present in and around Addis Ababa are the Akaki Rivers which traverse the city from north eastern and north western parts of the city down to the southern plains culminating at Lake Aba-Samuel. The catchment area of the Akaki river basin is divided into two sub-catchment areas. These are the Great Akaki River (Eastern and South eastern) sub-catchment and the Little Akaki river (Western and south western) sub-catchment. Most of the five selected road corridors cross over the main or tributaries of the Great Akaki River. For example the road corridor that extends from Arat Killo to Atkilt Tera through Degol square crosses one of the main tributary of the Great Akaki River at Ras Mekonen Bridge. In a similar way the same tributary is also crossed further down by the road corridor that extends from Oumer Semeter to National

Palace at Eriy Bekentu bridge. It is observed that the great and little Akaki are also the major carriers of wastes released into it and its small tributary streams. The wastes entering into the river systems include municipal and industrial wastes of solid and liquid nature. As a result the rivers are observed to sustain continued water pollution as has been confirmed by numerous studies. The Akaki Rivers and its catchment belong to the Awash Basin.

Addis Ababa city fundamentally possesses an urban environment. The built up area in Addis Ababa city comprises, however, large canopy of terrestrial vegetation that are grown as fencing shrubs, trees on open spaces, street side and median trees, recreational parks, botanical gardens and indigenous trees in religious places such as churches. Urban forests are the sum of all tree-based vegetation in and near urban areas and include woodlands, parks, gardens, nature areas, street trees, plantations, and botanical gardens. Urban green areas in the city continue to shrink gradually and suffer from illegal encroachment, infrastructure development, and damages by all kinds of construction activities.

The vegetation cover along the street sides and maidens of the five road corridors selected for improvement is comparatively scarce. Out of the selected five road corridors, the Addis Gebeya – Giorgis road is better furnished with street side and maiden trees and flowers. A good section of the road corridor that extends from Arat Kilo via Menaharia/Kasanchis to Bole Brass clinic is also partially furnished with trees. The remaining road corridors are hardly furnished with street side trees and other vegetation except in some sections that occur sporadically. However, trees and shrubs are commonly found inside the premises of many public and private houses and buildings that are found along the selected road corridors. According to Arada sub city Beautification, Parks and Cemeteries Agency, the tree species type presently found on the side and maidens of the city roads including along the selected road corridors consists of *Grevillea robusta, Phoenix Dactylifera, Araucaria, Acacia Decurrens, Arzelibanos, Azandirach taindica, Cupressuslusitanica, Cupressus pyramidalis, Shinus mole, Hibiscus rosa-sinesis, and Juniperus procera.*

The selected road corridors are characterised by commercial activities mixed with social services (e.g. schools, hospitals e.t.c), financial institutions (Banks & insurances) and high public offices. The six sub cities (i.e. Arada, Gulele, Kirkos, Bole and Addis Ketema) within which the five road corridors are situated represent the densely populated urban core areas of the city with a mix of old and modern built up areas. The urban core of the city consists of those areas where Addis Ababa was established in the late 1880s E.C. As a result there are several heritage sites in the area which

are registered and recognised by the Addis Ababa region Culture and Tourism Bureau. Some among the heritage sites found along the selected road corridors include the Armenia Church, Greek Church, Ras Mekonnen Monument, Ras Mekonnen Bridge, Cinema Empire, Cinema Ethiopia, Old Post Office, Small Semien Hotel, Africa Andnet School, Cathedral School, Cathedral Church, First Municipality, First Abyssinia Bank (current Statistics Authority), and e.t.c. The complete list of heritage sites found along the road corridors is attached in Annex B.

The ambient air quality of Addis Ababa city is not regularly monitored. Thus data on ambient air quality are scares. However, there are few studies that show emergence of air pollution problem in the city. A study on state of air pollution was conducted in 2012 by the Addis Ababa Institute of Technology by taking twelve traffic congested sites in the City. The study found that $PM_{2.5}$ measured values exceeded the WHO standard at all sites. Another study (Awoke et.al. 2013) conducted in 2011 in Addis Ababa (using bio-monitoring; lichens as pollution indicators) near major bus stations indicated that the ambient air of those corners of the city was highly polluted mainly due to heavy traffic.

The number of registered motor vehicles in Addis Ababa is not that large, even by Sub-Sahara African standard. In the mid of 2015, the number of registered vehicles in Addis Ababa was 465,152 vehicles. However, a recent baseline study on the "Effect of Motor Vehicles on Air pollution in Addis Ababa" conducted by Vehicular-Smog less Air for Ethiopia (V-Safe) in collaboration with the AAEPA in 2011; show that the contribution of vehicular emission to air pollution of the city is significant. According to the study, the fleet of roughly 275,500 vehicles in Addis Ababa were adding between 25,000 and 32,000 tons of hydrocarbons per year and 49,000 to 58,000 tons per year of carbon monoxide to the city's air. These are serious quantities of pollutants, which are causing health problems and environmental problems. This study confirms that exhaust gases from vehicles pollute Addis Ababa's air, and that improperly maintained vehicles contribute significantly to this pollution.

The aforementioned baseline study also conducted roadside inspections on 781 randomly selected vehicles. The median age of the sampled vehicles was 17 years. The overall weighted average vehicle tailpipe HC and CO emissions were found to be 876 ppm and 4.6%, respectively, which is

almost equal to the maximum allowable standards for the oldest vehicles (1966-1967) in the California BAR-90 Smog Check program (700 ppm and 5.5 % for idle and 600 ppm and 4.5 % for 2500 rpm) (California BAR, 1996). Roughly, 50% of the Addis Ababa vehicles tested produced about 90% of the HC and CO emissions

Map 1: Showing the Map of Addis Ababa City with its road networks (Source: Addis Ababa GHG Inventory, 2012)

Table 3: Summary of major environmental characters and sensitivities

No.	Environmental Character	Environmental sensitivity
1	Unmonitored rise of air pollution in Addis Ababa.	Sub projects that contribute to reduce automobile gaseous emissions will positively affect the environment.
2	Gross pollution of the Akaki rivers crossing Addis Ababa City.	Increased water pollution with expansion of road side drainages
3	Low cover of street medians and pavements by trees in Addis Ababa City.	Sub projects may exacerbate the situation by cutting off street median and side trees during construction.
4	Higher level of pedestrian mobility in Addis Ababa City	Exposure to high safety risks around drainage ditches, basement holes, and effect of dust.
5	Addis Ababa hosting numerous historical buildings, monuments and heritage sites.	Historical and heritage sites recognized at various levels may be exposed to construction risks.

2 ORGANIZATIONAL RESPONSIBILITIES FOR TRANSIP IMPLEMENTATION

The TRANSIP components have contained activities that involve the Federal Government and the city of Addis Ababa. The implementation arrangements have therefore been designed to involve two institutions, the Federal Road Transport Authority on behalf of the Ministry of Transport and Addis Ababa City Road and Transport Bureau (AACRTB) on behalf of the Addis Ababa City Administration. Whereas components-A and B of the TRANSIP will be implemented by Addis Ababa City Road Transport Bureau on behalf of the City administration, Component-C will be implemented by the Federal Transport Authority.

Each implementing agency will be responsible for fiduciary functions related to their respective activities, including procurement, managing resources, accounting and reporting on those resources, and, where relevant, ensuring compliance with World Bank environmental and social safeguards policies. The project implementation arrangement and associated roles and responsibilities of the organizations involved are elaborated further at Addis Ababa City and Federal levels as below.

2.1 ADDIS ABABA ADMINISTRATION LEVEL

The higher authority in the City administrative structure responsible for the city transport is AACRTB. Thus Addis Ababa Road and Transport Bureau is the responsible government body for the management and coordination of TRANSIP's Component-A and B project implementation. The Bureau will coordinate all beneficiaries and stakeholders taking part in Component-A & B. To ensure regular coordination and management of the TRANSIP Component A&B project, the AACRTB has established a steering committee that provides high level guidance for implementation of the TRANSIP project. The steering committee is chaired by the bureau head of AACRTB and Co-chaired by the TPMO. It will be responsible for providing high level guidance, coordination and implementation monitoring for the project. Members of the steering committee are high level officials of the TRANSIP Component-A & B beneficiary institutions which comprise heads of AACRTB, AACRA, TPMO, ACBE, PFTA, TMA and AALDMB.

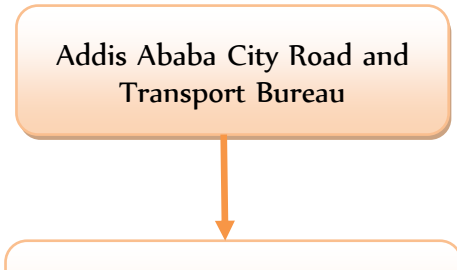
The overall regular management and coordination of the TRANSIP project will be supported by a Project Implementation Unit (PIU) reporting to the steering committee. The project implementation unit (PIU) will provide its support in running the day to day project implementation activities. Members of the PIU comprises experts from the beneficiary institutions and other personnel employed by the project. It is intended that the representation of the beneficiary/stakeholder institutions both at the steering committee and PIU level will help to ensure that they will have the ability to monitor and reflect their interests during the preparation of all technical documents, supervision and evaluation of project performance.

The Transport Programs Management Office (TPMO) co-chairs the steering committee and shall overlook the day-to-day activity and performance of the PIU. The PIU shall be headed by a project coordinator, with the capacity to communicate, coordinate, and manage the project. The PIU will be responsible for the preparation of ToRs, bidding documents, and technical evaluation and required documents that can be used by the financial and procurement teams within AACRA. The PIU shall prepare all reports pertinent to the project performance. It shall, then, communicate it to all stakeholders and the World Bank. The PIU will have safeguard specialists, procurement specialists, financial specialists, engineers (traffic engineer, design engineers) and specialists in the urban transport. It shall have horizontal communication and provide support to the financial and technical teams.

The AACRTB have delegated AACRA to administer the financial and procurement management of the TRANSIP Component-A & B with the technical inputs delivered from PIU. There will be dedicated financial and procurement teams within AACRA that will administer the procurement and financial management of the TRANSIP project.

The beneficiary/stakeholder institutions participating in the TRANSIP project at city level have areas of mandated responsibility that enables them to be engaged on the TRANSIP project implementation. For example, AACRA is responsible for the development and administration of the city roads and road furniture; ACBE is responsible for the provision of accessible city bus services; TPMO is responsible for capacity development of transport institution, coordination and integration of multi-stakeholder transport projects, and strategic planning of transport system for the city; TMA is responsible for the management and improvement of city traffic flow, traffic safety, and parking; and finally the PFTA is responsible for the regulation and development of public and freight transport system of the city. Thus, AACRA, TPMO, TMA, and PFTA will have roles in the selected complete street corridor development sub-projects.

Fig 4: Showing Institutional Responsibilities for Project Management at Addis Ababa City Level.



2.2 AT FEDERAL LEVEL

Component-C of the TRANSIP project will be implemented by the Federal Transport Authority at national level. The FTA will be the main project implementing agency for Component-C of the TRANSIP. The project implementation arrangement at federal level consists of three tier structure that consists of an executive committee, a steering committee and project implementation unit (PIU).

The Executive Committee is the higher committee spearheading the implementation of TRANSIP Component-C project. It will be responsible to provide strategic guidance and any required high level political decisions regarding the project implementation. The executive committee will be responsible to ensure proper co-ordination between different stakeholders, progress monitoring and review of the project, resolution of issues and concerns and overall responsibility of ensuring project success. The executive committee would also advise all stakeholders on project related aspects and resolve escalation from the steering committee. The Executive committee is chaired by the Minister of Transport and its members include the Director of Transport Authority, Presidents of the Regional States, and representative of the MoFEC.

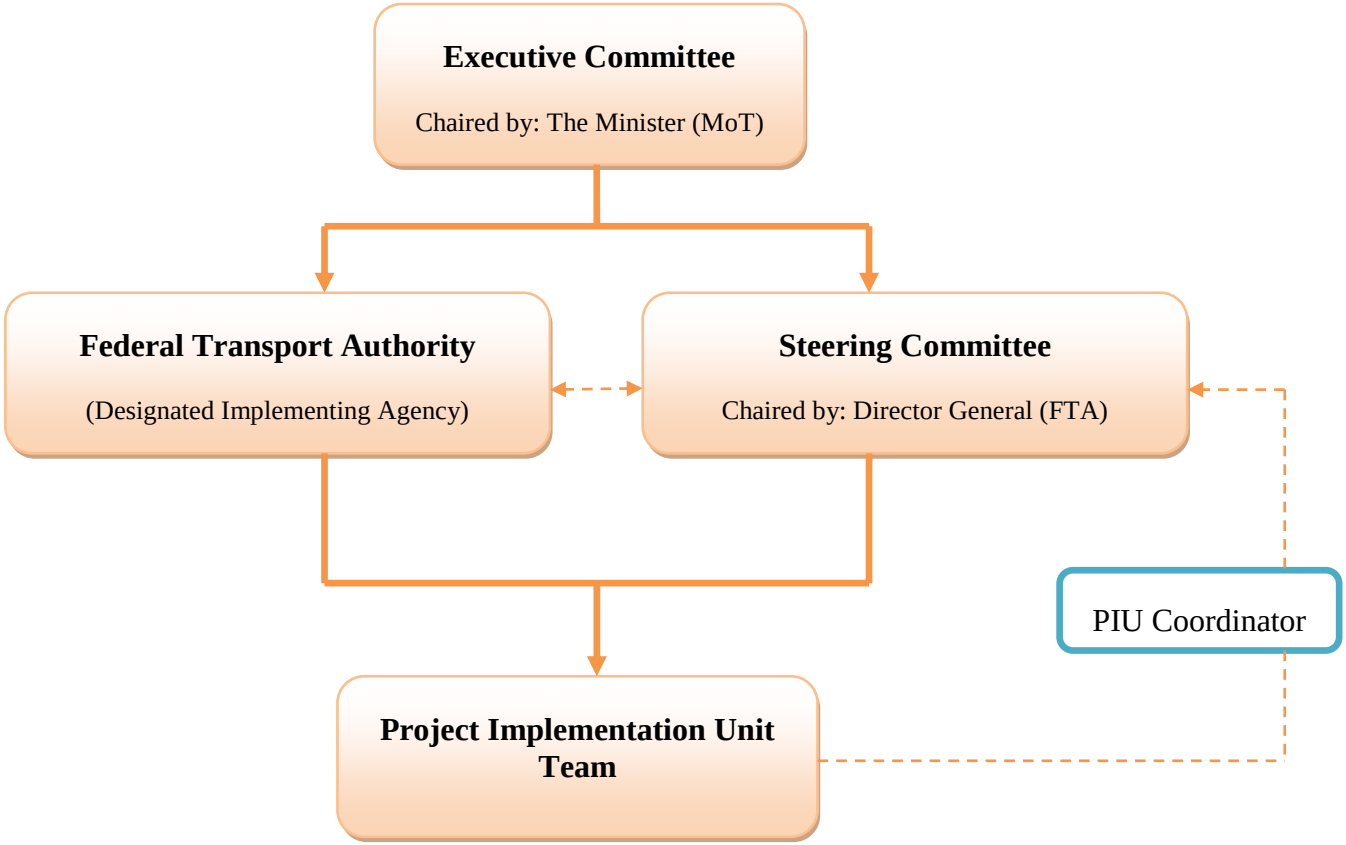
The Steering Committee would be responsible for the approval of tender documents, tender evaluation results, contractual agreement and the overall control of the project. It would be also responsible to ensure successful implementation of the project and executing the guidance, direction and strategic input provided by the Executive committee. The Steering Committee will be responsible for monitoring and controlling the project activities as per the contractual agreement and other relevant document. The steering committee would advise all stakeholders on project related aspects and resolve escalation from project stakeholders. The committee will be chaired by the Director General of FTA and its members include; regional heads for Bureau of Transport, Federal Police representatives, and relevant FTA directors.

The Project Implementation Unit would be responsible to ensure project success. It would co-ordinate and executes the day to day project implementation activities and it will report to the steering committee. The PIU will also oversee operational challenges, undertake field monitoring and control of project activities as per the project plan and report it to the steering committee. The key roles and responsibilities of the PIU include the following:

- Prepare TOR for each project packages
- Successful implementation of project activities as per the agreed project plan
- Completion of scheduled activities as per the project plan
- Co-ordination of activity between the stakeholders – Private Partner and Transport Bureau
- Monitoring and overseeing successful implementation of the project activities on the ground
- Report project progress to steering committee

- Identification of project risk and its mitigation and resolution

Fig 5: Showing Institutional Responsibilities for Project Management at National Level.



3 LEGAL, POLICY AND ADMINISTRATIVE FRAMEWORK

3.1 THE CONSTITUTION AND RELEVANT POLICIES

3.1.1 The Constitution of Ethiopia

The constitution of the Federal Democratic Republic of Ethiopia provides the overriding principles for all legislative frame-works in the country. The concept of sustainable development and the environmental rights of the people are protected in the constitution by the articles that stipulate the rights of peoples in the country. The concept of sustainable development and environmental rights are enshrined in article 43, 44 and 92 of the Constitution of GOE.

Article 43: The Right to Development identifies peoples' right to:

- Improved living standards and to sustainable development; and
- Participate in national development and, in particular, to be consulted with respect to policies and projects affecting their community.

Similarly, in Article 44: Environmental Rights, all persons:

- Have the right to a clean and healthy environment; and
- Who have been displaced or whose livelihoods have been adversely affected as a result of State programs has the right to commensurate monetary or alternative means of compensation, including relocation with adequate State assistance.

Moreover, in Article 92: Environmental objectives are identified as:

- Government shall endeavour to ensure that all Ethiopians live in a clean and healthy environment.
- The design and implementation of programs shall not damage or destroy the environment.
- People have the right to full consultation and to the expression of views in the planning and implementation of environmental policies and projects that affect them directly.
- Government and citizens shall have the duty to protect the environment.
- Maintains land under the ownership of the Ethiopian people and the government but protects security of usufruct tenure;
- Ensures the equality of women with men;
- Maintains an open economic policy;
- Recognises the rights of groups identified as "Nations, Nationalities and Peoples" having a common culture or similar customs, mutual intelligibility of language, belief in a common or related identity, a common psychological make-up, and who inhabit an identifiable, predominantly contiguous territory.

3.1.2 Environmental Policy of Ethiopia

The goal of the Environmental Policy of Ethiopia is to improve and enhance the health and quality of life of all Ethiopians and to promote sustainable social and economic development through the sound management and use of resources and the environment as a whole so as to meet the

needs of the present generation without compromising the ability of future generations to meet their own needs. For the effective implementation of the Environmental Policy of Ethiopia the policy encourages creation of an organizational and institutional framework from Federal to community levels. The Environmental Policy of Ethiopia provides a number of guiding principles that require adherence to principles of sustainable development; in particular the need to ensure that Environmental Impact Assessment:

a) Considers impacts on human and natural environments;
b) Provides for early consideration of environmental impacts in projects and programs design;
c) Recognizes public consultation;
d) Includes mitigation and contingency plans;
e) Provides for auditing and monitoring; and
f) Is a legally binding requirement.

3.1.3 Growth and Transformation Plan (GTP 2)

3.1.4 Ethiopian Cities Sustainable Prosperity Initiative (ECPI)

MUDHCo has developed and launched the *Ethiopian Cities Sustainable Prosperity Initiative (ECPI).* The ECPI will lead to the establishment of Green Growth, Resilient and Well Governed Cities that support Ethiopia's transformation from a predominantly agricultural nation to a nation with a rapidly growing industrial sector that contributes to the economic growth necessary to achieve middle income country status by 2025.

The ECPI comprises nine pillars, one of which (i.e. Pillar 4) is focused on Urban Planning, Land Development and Management. Pillar 4 underpins the importance of applying an effective land use policy that facilitates and coordinates efficient infrastructure, enterprise, civic and community development that enhances a city's ability to operate smoothly. Pillar 4 of the ECPI acknowledges the lack of strategic planning in the fast growing cities of Ethiopia, including the capital city, and this has resulted in urban sprawl, severe traffic congestion, increased commuting time, over-crowded public transport and increased pressure on local authority services such as water and waste collection and disposal. It stresses that land use policy plays a key role in determining the levels of mobility within cities. Forward looking spatial planning can facilitate a city becoming more

enterprising, connected, sustainable and attractive and inclusive. The Ethiopian Cities Prosperity Initiative aims to strengthen municipal capacity in urban plan preparation, as well as in land use planning and spatial development.

3.2 ENVIRONMENTAL PROCLAMATIONS

3.2.1 *Proclamation 299/2002, Environmental Impact Assessment*

This Proclamation (No 299/2002) aims primarily at making the ESIA mandatory for categories of projects specified under a directive issued by the MoEFCC. The Proclamation makes ESIA mandatory for specified categories of activities undertaken either by the public or private sectors, and possibly, the extension of ESIA to policies, plans and programmes in addition to projects. The proponent of the project (whether it is public or private body) must prepare an ESIA following the requirements specified in the legislation (article 8) and associated guidelines. The Ministry of Environment, Forest and Climate Change or the sector Ministries delegated by it and relevant Regional Environmental Agencies will then review the ESIA and either approve the project (with or without conditions) or reject it.

The Proclamation requires, among other things:

- Specified categories of projects to be subjected to an ESIA and receive an authorization from the Ministry of Environment, Forest and Climate Change or the relevant regional environmental agency prior to commencing implementation of the project.
- Licensing agencies to ensure that the requisite authorization has been duly received prior to issuing an investment permit, a trade or operating license or a work permit to a business organization.
- The Ministry of Environment and Forestry or the relevant regional environmental agencies may issue an exemption from carrying out an ESIA in projects supposed to have an insignificant environmental impact.
- A licensing agency may suspend or cancel a licence that has already been issued where the Ministry of Environment and Forestry or the relevant regional environmental agency suspends or cancels environmental authorization.

Procedures that need to be followed in the process of conducting an environmental impact assessment are described in the Proclamation and further elaborated in the draft ESIA procedural guideline issued in 2003 E.C. Thus a project developer is expected to act as follows:

- Undertake a timely environmental impact assessment, identifying the likely adverse impacts, and incorporating the means of their prevention.
- Submit an environmental impact study report to the Ministry of Environment and Forest, delegated sector ministry or the relevant regional environmental agency for review and approval.

To put this Proclamation into effect the Ministry of Environment, Forest and Climate Change has issued an ESIA Directive (Directive no.1/2008) and other draft procedural guideline documents, which provide details of the ESIA process and its requirements.

Based on the Federal ESIA Proclamation No 299/2002, many of the regional states have also prepared and put in force their own ESIA regulations. Some of these regional ESIA regulations put stricter rules on the project proponents and ESIA practitioners to facilitate for the preparation of ESIA's with dependable and sufficient information that would enable sound decision making.

3.2.2 *Proclamation 300/2002, Environmental Pollution Control*

Proclamation No. 300/2002 on Environmental Pollution Control primarily aims to ensure the right of citizens to a healthy environment and to impose obligations to protect the environment of the country. The proclamation is based on the principle that each citizen has the right to have a healthy environment, as well as the obligation to protect the environment of the country. The law addresses the management of hazardous waste, municipal waste, the establishment of environmental quality standards for air, water and soil; and monitoring of pollution. The proclamation also addresses noise and vibration as one source of environmental pollution and it seeks for standards and limits for it providing for the maximum allowable noise level taking into account the settlement patterns. In general, the Proclamation provides a basis from which the relevant environmental standards applicable to Ethiopia can be developed, while sanctioning violation of these standards as criminally punishable offences.

Furthermore, it empowers the MoEFCC and/or the Regional Environmental Authority to assign environmental inspectors with the duties and responsibilities of controlling environmental pollution. In order to ensure implementation of environmental standards and related requirements, inspectors belonging to the MoEFCC or the relevant regional environmental agency are empowered by the Proclamation to enter, without prior notice or court order, any land or premises at any time, at their discretion. Such wide powers derive from Ethiopia's serious concern and commitment to protecting the environment from pollution.

3.2.3 *Proclamation 513/2007, Solid Waste Management*

This proclamation came into force with an objective of implementing effective solid waste management in the country. The Proclamation recognized the existing solid waste management problems in the country and emphasizes the need to prevent environmental pollution that may result from the disposal of solid waste. The MoEFCC is responsible for initiating and overseeing the implementation of overall policies, strategies and guidelines on solid waste management. Regional environmental agencies and City Administrations are also responsible for drawing out their plans as regards the implementation of the Proclamation and monitoring efficacy.

The Proclamation promotes community participation in order to prevent adverse effects and enhance benefits resulting from solid waste. It provides for preparation of solid waste management action plans by urban local governments. Therefore Article 5.1 of the proclamation states that Urban Administrations shall ensure the participation of the lowest administrative levels and their respective local communities in designing and implementing their respective solid waste management plans. In Article 5.1 each Region or urban administration shall set its own schedule and, based on that, prepare its solid waste management plan and report of implementation.

In this proclamation the following provisions are provided in relation to the treatment and disposal of solid waste:

As Regards to Penalty

Without obtaining authorization, a person who implements a solid waste management project that requires special permit before its implementation as determined in a directive issued by the relevant environmental agency commits an offence and shall be liable according to the relevant provision of the criminal code.

3.2.4 *Proclamation No 209/2000: Research and Conservation of Cultural Heritage*

The Proclamation outlines the requirements for studying cultural heritage and specifies that a permit is required before any exploration; discovery or study of cultural heritage may be undertaken. Requirements for chance finds are also outlined in the Act. Article 41 which states that: "*Any person who discovers any cultural heritage in the course of excavation connected with mining, explorations, building works, road construction or other similar activities shall report to the Authority and protect and keep same intact until the Authority takes delivery thereof*". The Authority shall take all appropriate measures to examine, take delivery and register the Cultural heritage so discovered. Where the Authority fails to take appropriate measures within 6 months, the person that discovered the cultural heritage may be released from the responsibility by submitting a written notification with a full description of the situation to the Regional Government official.

3.2.5 *Public Health Proclamation*

The Public Health Proclamation comprehensively addresses aspects of public health, waste handling and disposal, including food quality control, food standard requirements, water quality control, availability of toilet facilities, and the health permit and registration of different operations.

3.2.6 *Proclamation 377/2003: The Labour law*

The Labour Proclamation (which was revised in 2003) provides 'the basic principles which govern labour conditions taking into account the political, economic and social policies of the Government, and in conformity with the international conventions and other legal commitments to which Ethiopia is a party with a view to translating into practice the objectives referred to above'. In Part Seven, Chapter One, Article 92 of this proclamation (Occupational Safety, Health and Working Environment, Prevention Measures and Obligations of the Employers), the requirements in

terms of the protection of workforce health and safety is clearly stipulated. The proclamation requires an employer to take the necessary measures to adequately safeguard the health and safety of the workers. Workforce health and safety is an important aspect considered for identifying the potential environmental, health and safety issues that can arise from the project.

3.2.7 *Regulation 159/2008, Prevention of Industrial Pollution Regulation*

As a follow up to Proclamation 300/2002, a regulation to prevent industrial pollution was developed by the Federal Environmental Protection Authority and endorsed by the Council of Ministers to ensure compatibility of industrial development with environmental conservation.

This Regulation confers important obligations to industrial operators. A factory subject to the regulations is obliged to prevent or minimize the generation and release of pollutants to a level not exceeding the environmental standards. The regulation also obliges industrial operators to handle its equipment, inputs and products in a manner that prevents damage to the environment and to human health. Moreover, the regulations urge industrial operators to prepare and implement an emergency response system of their own. On the other hand industrial operators are required to prepare and implement internal environmental monitoring systems and keep written records of the pollutants generated and the disposal mechanisms used to get rid of the pollutants. In relation to it, factories are required by the regulation to submit annual compliance reports with the provision of the regulations.

3.2.8 *Proclamation No 455/2005: Expropriation of landholding for Public Purposes and Payment of compensation*

The proclamation provides for the expropriation of landholdings for public purposes and payment of compensation and establishes the legal principles and framework for expropriation and compensation.

Regarding the determination of compensation, the basis and amount of compensation is clearly explained in Article 7(1) which states that “land holder whose holding has been expropriated shall be entitled to payment of compensation for his property situated on the land and for permanent improvements he made”. Article 7(2) also states that “the amount of compensation for property situated on the expropriated land shall be determined on the basis of replacement cost of the property”.

Under article 8(1) of this proclamation a displaced land holder whose land holding has been permanently expropriated shall in addition to the compensation payable under the articles of this proclamation is paid displacement compensation, which shall be equivalent to ten times the average annual income he secured to bring the five years preceding the expropriations of the land.

3.2.9 *Regulation No 135/2007: Council of Minister Regulation*

The regulation is titled "payment of compensation for property situated on land holdings expropriated for public purposes". It is issued by the council of Ministers for the purpose of not only paying compensation but also to assist displaced persons to restore their livelihood. The regulation provides the procedures for application of proclamation No 455/2005, for compensation payment for property situated on expropriated land for public benefit.

The regulation identified the type of properties eligible for payments of compensation which includes buildings, fences, crops, perennial crops, trees, protected grass, improvement made on rural land; relocated property, mining license and burial grounds.

3.2.10 *Environmental guidelines and standards*

The MoEFCC has issued some guidelines and standards which are endorsed by the National environmental council. The purpose of these guidelines and directives is to ensure that development projects integrate environmental considerations in the planning process as a condition for their approval. These include Directive No.1 /2008, which was issued to determine projects subject to environmental impact assessment. According to this directive, the ESIA Proclamation is to be applied to the types of projects listed under the directive. The types of projects subject to ESIA in the transport sector include construction of Roads with a traffic flow of 1000 or more and any project planned to be implemented in or near areas designated as protected. The TRANSIP project intends to finance selected road corridor improvement projects within Addis Ababa City.

In a similar manner it is indicated that the National environmental council has endorsed certain effluent standards for specified industrial sectors. The endorsed effluent standards for the specified 12 industrial sectors are posted on the official website of the Ministry of Environment and Forest, but are not officially published in the same way as directive no.1/2008. As a result, these are widely considered as draft effluent standards for

Ethiopia. Other draft environmental guidelines prepared and posted on the website of the MoEFCC that are widely used for several years now include the following:

ESIA Procedural Guideline (draft), November 2003: This guideline outlines the screening, review and approval process for development projects in Ethiopia and defines the criteria for undertaking an ESIA. According to this ESIA procedural guideline, projects are categorized into three schedules:

Schedule 1: Projects which may have adverse and significant environmental impacts thus requiring a full Environmental Impact Assessment

Schedule 2: Projects whose type, scale or other relevant characteristics have potential to cause some significant environmental impacts but are not likely to warrant a full ESIA study

Schedule 3: Projects which would have no significant environmental and social impact and do not require an ESIA

However, projects situated in an environmentally sensitive areas such as land prone to erosion; desertification; areas of historic or archaeological interest; important landscape; religiously important area, etc. will fall under Schedule I irrespective of the nature of the project.

Guideline for Environmental and Social Management Plan (draft), May 2004: outlines the fundamental contents that need to be featured while preparing an Environmental and Social Management Plans (EMP) for proposed development projects in Ethiopia and provides template forms to be used for such purposes. The guideline also provides guidance on the preparation of institutional arrangements for implementation of EMPs.

ESIA Guideline, May 2000: The ESIA Guideline Document provides essential information
covering the following elements:

- Environmental Assessment and Management in Ethiopia
- Environmental Impact Assessment Process

- Standards and Guidelines
- Issues for sector environmental impact assessment in Ethiopia covering agriculture,

industry, transport, mining, dams and reservoirs, tanneries, textiles, hydropower generation, irrigation projects and resettlement

Table 4. Relevant MoEFCC Guidelines and Standards

GUIDELINE / STANDARD	DESCRIPTION
Directive No.1/2008	The directive lists about 22 types of development projects that are determined to be subject to ESIA in accordance with proclamation 200/2002. The directive is endorsed by the National Environment Council.
Draft ESIA Guideline, July 2000	The ESIA Guideline Document provides essential information covering: • Environmental Assessment and Management in Ethiopia • The Environmental Impact Assessment Process • Issues for sectoral environmental impact assessment in Ethiopia covering: agriculture, industry, transport, mining, dams and reservoirs, tanneries, textiles, hydropower generation, irrigation projects and resettlement projects. Annex 1 identifies the activities for which a full ESIA, partial measure or no action is required. Annex 2 provides an example of an application form. Annex 3 provides standards and guidelines for water and air.
Draft ESIA Procedural	The guideline outlines the screening, review and approval process for

Guideline, November 2003.	development projects in Ethiopia and defines the criteria for undertaking an ESIA.
Draft Guideline for Environmental Management Plan , May 2004	The guideline outlines the necessary measures for preparation of an Environmental Management Plan (EMP) for proposed developments in Ethiopia and the institutional arrangements for implementation of EMPs.
Environmental Impact Assessment Guidelines on Road and railway, 2004	The guideline focus on linear transport projects, more specifically on roads and railways, which have many common features in terms of environmental impacts. It highlights major issues and potential impacts that should be taken into account during the preparation and assessment phases.
Ethiopian Roads Authority (ERA) Environmental Procedures Manual, 2001	ERA prepared this manual for the use and technical guidance for design personnel of the Ethiopian Roads Authority and consultants doing an Environmental Assessment Study during road design. The manual was developed in order to standardize Environmental Procedures for design of new roads and rehabilitation of existing roads.

3.3 WORLD BANK SAFEGUARD REQUIREMENTS

The present TRANSIP ESMF will serve as an instrument to help satisfy the Bank's requirement under OP 4.01 and guide the preparation of one or more Environmental Assessments (EA) as needed for the project. In the present context of the TRANSIP, the Environmental Assessment must take into account the natural environment (air, water, and land); human health and safety; as well as social aspects (involuntary resettlement and physical cultural resources). The Environmental Assessment will consider natural and social aspects in an integrated way. The following paragraphs provide further explanation on the World Bank Polices triggered by TRANSIP.

OP/BP 4.01 Environmental Assessment

The TRANSIP ESMF seeks to address the requirements of OP/BP 4.01 on Environmental Assessment. The objective of this policy is to ensure that TRANSIP sub-projects are environmentally sound and sustainable, and that decision-making is improved through appropriate analysis of actions and of their likely environmental impacts. This policy is triggered if a TRANSIP sub-project is likely to have adverse potential environmental risks and impacts on its area of influence.

The Bank reviews as necessary the environmental screening of each proposed TRANSIP sub-project to ensure whether the appropriate extent and type of EA is determined for the TRANSIP subproject. The Bank ensures classification of the proposed sub-project into one of the three categories, depending on the type, location, sensitivity, and scale of the project and the nature and magnitude of its potential environmental impacts

Category A: Proposed project is classified as category A if it is likely to have significant adverse environmental impacts that are sensitive, diverse, or unprecedented. These impacts may affect an area broader than the sites or facilities subject to physical works. Category-A TRANSIP subprojects will not be financed by the Bank.

Category B: Proposed project is classified as category B if it's potential adverse environmental impacts on human population or environmentally important areas-including wetlands, forests grasslands and other natural habitats –are less adverse than those of Category A projects. These impacts are site specific; few if any of them are irreversible; and in most cases mitigation measures can be designed more readily than for Category A Projects.

Category C: a proposed Project is classified as category C if it is likely to have minimal or no adverse environmental impacts. Beyond screening, and application of Environmental Guideline for construction contractors, no further EA action is required for a category C Projects.

The following paragraphs provide further explanation on the World Bank Polices triggered by TRANSIP.

In addition, OP/BP 4.01 requires that during the EA process, for all Category A and B projects, the implementing agency consult project-affected groups and local nongovernmental organizations (NGOs) about the project's environmental aspects and takes their views into account. The

implementing agency will initiate such consultations as early as possible. For Category A projects, the implementing agency consults these groups at least twice: (a) shortly after environmental screening and before the terms of reference for the EA are finalized (i.e. scoping); and (b) once a draft EA report is prepared. In addition, the implementing agency will consult with such groups throughout project implementation as necessary to address EA related issues that affect them.

OP/BP 4.11 Physical Cultural Resources

The objective of this policy is to assist the implementing agency to avoid or mitigate adverse impacts of TRANSIP sub-projects on physical cultural resources. For purposes of this policy, "physical cultural resources" are defined as movable or immovable objects, sites, structures, groups of structures, natural features and landscapes that have archaeological, paleontological, historical, architectural, religious, aesthetic, or other cultural significance. Physical cultural resources may be located in urban or rural settings, and may be above ground, underground, or underwater. Their cultural interest may be at the local, provincial or national level, or within the international community.

The impacts on physical cultural resources resulting from project activities, including mitigating measures, may not contravene either the Country's national legislation, and OP/BP 4.11, or its obligations under relevant international environmental treaties and agreements. The following projects are classified during the environmental screening process as Category A or B, and are subject to the provisions of this policy: (a) any project involving significant excavations, demolition, movement of earth, flooding, or other environmental changes; and (b) any project located in, or in the vicinity of, a physical cultural resources site recognized by the Country. The implementing agency identifies physical cultural resources likely to be affected by the TRANSIP sub-project and assesses its potential impacts on these resources as an integral part of the EA process, in accordance with the Bank's EA requirements. The TORs normally specify that physical cultural resources be included in the baseline data collection phase of the EA. As an integral part of the EA process, the implementing agency develop a physical cultural resources management plan that includes measures for avoiding or mitigating any adverse impacts on physical cultural resources, provisions for managing chance finds, any necessary measures for strengthening institutional capacity, and a monitoring system to track the progress of these activities. The physical cultural resources management plan is consistent with the country's overall policy framework, OP/BP 4.11 and national legislation and takes into account institutional capabilities with regard to physical cultural resources.

OP/BP 4.12 Involuntary Resettlement

Involuntary Resettlement is triggered in situations involving involuntary taking of land and involuntary restrictions of access to legally designated parks and protected areas. The policy aims to avoid involuntary resettlement to the extent feasible, or to minimize and mitigate its adverse social and economic impacts. It promotes participation of displaced people in resettlement planning and implementation, and its key economic objective is to assist displaced persons in their efforts to improve or at least restore their incomes and standards of living after displacement. The policy prescribes compensation and other resettlement measures to achieve its objectives and requires that borrowers prepare adequate resettlement planning instruments prior to Bank appraisal of proposed projects.

This policy covers not only physical relocation but any loss of land or other assets resulting in: (i) relocation or loss of shelter: (ii) loss of assets or access to assets; (iii) loss of income sources or means of livelihood, whether or not the affected people must move to another location. This policy also applies to the involuntary restriction of access to legally designated parks and protected areas resulting in adverse impacts on the livelihoods of the displaced persons. In the event that there are differences between national legislation and OP 4.12, the provision of the later will prevail during project implementation.

The applicable World Bank safeguard policies as it applies to the TRANSIP project are summarized in table 5.

Table 5: World Bank – Applicable Operational Policies, Bank Procedures

Safeguard Policies	**Triggered?**	**Explanation (Optional)**
Environmental Assessment OP/ BP 4.01	Yes	The TRANSIP project will finance a variety of sub-projects that will consist of infrastructures including construction and maintenance of pavements, drainages, traffic control center, installation of traffic signal system, installation of street lighting

		e.t.c. The environmental and social risks associated with these kinds of infrastructures can be, but will in most cases, not be significant. It is therefore possible that TRANSIP sub-projects may fall into OP 4.01 Category B or C. The ESMF checklist is designed to identify these potential impacts, and direct the implementing agency (PIU) to practical ways of avoiding or mitigating them. The screening process that will determine whether identified TRANSIP sub-projects will require an ESIA or not, should only be carried on sub-projects that are approved by the steering committee or the implementing agency. ESIAs and Environmental Management Plans (EMP) will be prepared as necessary, in line with the ESMF, once the exact nature and locations of the TRANSIP sub-projects have been identified and environmental and social screening is conducted. Safeguard guideline and environmental and social screening checklists are included in this ESMF to be used by the implementing agency/PIU/ staff and staff of other involved implementing agencies in addressing these issues. The ESMF will be submitted for Bank review and publicly disclosed in-country and in the Info Shop prior to appraisal.
Cultural Property (OP 4.11)	yes	Ethiopia has **9** sites that are classified as UNESCO World Cultural Heritage sites. None of these World Heritages sites are situated in

		Addis Ababa, which is the main target location for the TRANSIP sub-projects implementation. However, Addis Ababa City has many historical, religious, and cultural properties that are of significance at National and City level and registered by the City Administration Culture and Tourism Bureau. TRANSIP sub projects will be classified during the environmental screening process as Category B or C, and are then subject to the provisions of OP 4.11. If there is a possibility that TRANSIP subproject construction may result in damage to cultural property, the ESMF specifies procedures for avoiding such damage (refer sec 4.4.2 & 3.2.4). Chance find procedures will be incorporated into civil works supervision plan, and buffer zones will be created to avoid damage to cultural resources.
Involuntary Resettlement OP /BP 4.12	yes	A Resettlement Policy Framework (RPF) has been prepared for the TRANSIP project. Resettlement Action Plans (RAPs) will be prepared as necessary, in line with the RPF, once the exact nature and locations of TRANSIP subprojects have been identified. The RPF will be submitted for Bank review and publicly disclosed in country and in the Info Shop prior to appraisal.

3.4 INSTITUTIONAL FRAMEWORK FOR NATIONAL ENVIRONMENTAL MANAGEMENT

3.4.1 *Proclamation 295/2002, Establishment of Environmental Protection Organs*

The Environnemental Protection Proclamation (Proc. 295/2002) assigns responsibilities for environmental management to various entities in order to ensure sustainable use of environmental resources, thereby avoiding possible conflicts of interest and duplication of efforts. It is also intended to

establish a system that fosters coordinated but differentiated responsibilities among environmental protection offices at a Federal and Regional State level. Each of the main Federal institutions active in the construction of infrastructure, or economic development is required by law to have its own environmental unit.

3.4.2 *Ministry of Environment, Forest and Climate Change*

At the National level, the MoEFCC is mandated with responsibilities for management of environmental issues. An amendment to the definition of powers and duties of the executive organs of the FDRE which was made in 2013 (proclamation no. 803/2013) gives the MoEFCC powers to fulfill its role in ensuring the realization of the environmental objectives provided under the constitution. In a recent and similar amendment to the definition of powers and duties of the executive organs of the FDRE that was made following the 2015 General elections, the name of the Ministry was slightly changed from MoEF to MoEFCC to reflect the focus of its growing role in Climate Change activities. MoEFCC is involved in the development of environmental policy and legislation; setting environmental quality standards for air, water and soils; monitoring pollution; establishing systems and procedures for ESIA; and in establishing a national environmental information system.

Enforcing the laws and policies including ESIA, environmental monitoring and auditing, for all projects or activities that falls under the control of the Federal Government also falls within the responsibilities of the MoEFCC and its delegated sector ministries. MoEFCC had delegated six sector ministries including the Ministry of Transport; Information and Communication, Ministry of Mining, Agriculture, Industry, Water & Energy, as well as Ministry of Trade. The delegated sector Ministries have been assigned the dual role of reviewing ESIA reports as well as ensuring timely and effective implementation supervision of sector specific ESIAs.

The Regional States are also required to establish their own regional environmental agencies, which are responsible for ESIAs for regionally managed infrastructures or development activities. The Ministry of Environment, Forestry and Climate Change (MoEFCC) is required to provide regional authorities with guidance, technical support, and capacity building; support the development of various guidelines, including procedures appropriate to sector projects; undertake awareness creation in other federal agencies; and provide technical support to those agencies.

Following the screening, review and comment of environmental impact statements both the MoEFCC and REPAs approve project ESIAs and issue an environmental clearance/ permit where applicable. MoEFCC and Regional Environmental Protection Authorities (REPAs) also undertake environmental audits where required to ensure that projects are complying with their Environmental Management Plans (EMPs) and their commitments to environmental mitigation and monitoring.

3.4.3 Addis Ababa Regional Government Environment Protection Authority

Proclamation 295/2002 requires regional states to establish or designate their own regional environmental agencies. Relating to ESIA specifically, Proclamation 299/2002 gives regional environmental agencies the responsibility to evaluate ESIA reports of projects that are licensed, executed or supervised by regional states and that are not likely to generate inter-regional impacts. Regional environmental agencies are also responsible for monitoring, auditing and regulating implementation of such projects. In case of Addis Ababa, the City Administration has established the Addis Ababa Region Environment Protection Authority in the early 1990s. The Addis Ababa regional EPA has also promulgated regulations that include "AACG Environmental Impact Assessment Regulation 21/2006".

Role in the Implementation of the ESMF: Following screening of subprojects and preparation of full or partial ESIAs as necessary by the responsible implementing agency/PIU/, the AAEPA will subsequently review and approve the screening reports as well as the sub-project Full/Partial ESIAs and it will issue an environmental permit/license where applicable. The AAEPA will undertake environmental audits where required to ensure that the implementing agency is complying with their Environmental Management Plans (EMPs) and their commitments to environmental management, mitigation and monitoring.

3.5 THE ESMF AND RESETTLEMENT POLICY FRAMEWORK

A Resettlement Policy Framework for the project is prepared in a separate document and it forms an integral part of the overall Environmental and Social Management Framework for the TRANSIP project.

The majority of TRANSIP sub-projects are expected to impact mainly on urban core areas of Addis Ababa city, where the selected road corridors for improvement and other proposed sub-projects will be implemented. For this reason, the RPF provides for cases of compensation and resettlement in urban situations.

The implementing agency officials (AACRTB, AACRA, TPMO & Steering committee members) and PIU experts involved in implementation of the ESMF should read carefully the Resettlement Policy Framework and the national/regional legislation related to Expropriation of land for public purposes and compensation. The RPF will contain full details of the RAP preparation process, Proclamation 455/2005: Expropriation of Land Holdings for Public Purposes and Payment of Compensation and the Regulations No. 135/2007 on the Payment of Compensation for Property Situated on Landholdings Expropriated for Public Purposes. In the event that there are differences between national legislation and OP 4.12, the provision of the later will prevail during project implementation.

4 ESMF PROCESSES AND IMPLEMENTATION

This section outlines the procedures that the TRANSIP implementing agencies and related stakeholders will follow to identify, assess, and review the environmental and social aspects of subproject and oversee its implementation. The ESMF requires that all TRANSIP sub-projects approved by the steering committee be screened for social and environmental impacts. Screening will help to determine if a sub-project requires an ESIA or ESMP. The ESMF outlines the steps to be taken to realize the outcomes of the screening and categorization and describes the various elements of the process including:

- Steps to be taken for a full ESIA if required, including an application for environmental authorization;
- Guidelines on the environmental and social impacts of TRANSIP subprojects and
- Compliance mechanisms including proposed generic mitigation measures.

4.1 ENVIRONMENTAL AND SOCIAL RISKS ADDRESSED BY THE ESMF

The TRANSIP project has the potential to provide significant socioeconomic benefits, and to deliver environmental benefits. However there are risks of adverse environmental and social impacts, owing to:

- Inherent **environmental risks** involved in infrastructure projects, including dust and noise, safety and accidents, pollution or contamination of waterways and groundwater sources, and secondary impacts owing to the sourcing of construction materials;
- **Social risks** during construction of projects such as road, impacts on people, buildings (houses, schools, churches, shops, kiosks, etc) economic and social activities in the vicinity of the project, an influx of people to certain areas due to better facilities provision and improved access, risks of disruption to livelihoods and potential for economic resettlement and displacement of people associated with land take, and indirect social impacts from the downstream effects of project such as water supply, sewerage, electric power and telecom interruptions;
- **Limited implementation** capacity of the implementing agency involved to integrate measures to prevent or mitigate environmental impacts into the design of projects, and during construction, and operation of the projects.

These risks are taken seriously by the GoE and Addis Ababa City Administration owing to the importance of the environmental impacts involved and the need to ensure improvements in people's well-being. People's livelihoods are often dependent on a sustainable environment, and adverse environmental or social impacts of infrastructure projects will be carefully avoided or mitigated. The GoE has developed its environment institutions at Federal and Regional levels and corresponding legal framework for environmental management over the past twenty years. The activities set out in this ESMF therefore build on the GoE's laws, policies and procedures in environmental management and associated institutional arrangements. The TRANSIP ESMF will offer additional opportunities to enhance and strengthen environmental management practices by the GoE.

4.2 RESPONSIBILITIES IN THE ESMF SCREENING AND APPRAISAL PROCESS

The primary responsibility to conduct the screening of sub-projects rests on the implementing agency (i.e. AACRTB/TPMO) and the PIU which are responsible for implementing the TRANSIP sub-projects. The implementing agency (AACRTB) has established a Project Implementation Unit (PIU) under the steering committee which will constitute, among others, a focal person/specialist/ for environment. The PIU environment focal person will be in charge of conducting the environmental and social screening of each subproject. The environment focal person will be supported by other members of the PIU and in particular by the social safeguard specialist in conducting the environmental and social screening of sub-projects. Before submitting the environmental and social screening of subprojects with application for approval to the Addis Ababa EPA, it will be checked and approved internally by the Steering Committee. Table 6 below outlines the proposed roles and responsibilities for the different steps in screening and appraisal.

Table 6: Outline of Roles and Responsibilities for the ESMF.

<table>
<tr><th>Activity</th><th>Lead Role for preparation and/or implementation</th><th>Lead role for review, approval &monitoring</th></tr>
<tr><td>Completion of screening using the form in Annex A: Screening Form.</td><td>PIU/TPMO/ and Steering Committee of TRANSIP</td><td rowspan="4">Addis Ababa EPA and the World Bank, for review and clearance of ESIA and RAP documents.</td></tr>
<tr><td>ESIA, ESMP and RAP preparation</td><td>PIU/TPMO/ and Steering Committee + Independent consultants</td></tr>
<tr><td>Implementation of ESIA, EMP and RAP</td><td rowspan="2">PIU/TPMO/ and Steering Committee of TRANSIP + Beneficiary Stakeholder Institutions (e.g. AACRA) +</td></tr>
<tr><td>Monitoring of EMP and RAP implementation.</td></tr>
</table>

Annual Audit	Contractor + Regulatory Authorities	

4.3 PROCESS AND PROCEDURES OF THE ESMF

The proposed TRANSIP ESMF process and the procedural steps to be applied for identifying and managing environmental and social issues during subproject screening and approval are set out below. The proposed TRANSIP ESMF process for identifying and managing environmental and social issues is also presented in Figure 7.

4.3.1 Preparation

During the early stages of TRANSIP annual plan preparation process including during subproject selection and prioritization phases, the AACRTB/AACRA, Steering Committee members, the TPMO/PIU and beneficiary institutions e.t.c will have to prepare and familiarize themselves with the fundamentals of the ESMF process. This is done by accomplishing the following:

a) Reviewing ESMF.

   The implementing agency, steering committee, PIU and beneficiary institutions and the Addis Ababa EPA will have to obtain copies of the ESMF, as well as all relevant federal and regional laws, guidelines and procedures relating to environmental protection and cultural heritage. Members of the steering committees, PIU, the procurement team (AACRA), relevant beneficiary institutions experts and Addis Ababa EPA will have to complete training requirements for implementation of ESMF. This will help to ensure that there is good knowledge of TRANSIP ESMF requirements at different levels in the implementing agency, PIU and other professional and technical staffs.

b) Establishing contact with the Regional Environmental Protection Authority:

- Provide them with a copy of this ESMF document;
- Provide them with details of the contact at the AACRTB/TPMO and PIU
- Inform the Regional EPA that subprojects are being planned that may be classified as being Category B or C activities in terms of Federal and Regional environmental legislation.

c) Identifying interested and affected communities, NGOs, businesses, etc., and organizing meetings to inform them of the proposed activities and its potential impacts.

This preparation stage is an important exercise in creating a common understanding and awareness of the procedures involved among the key actors in the implementation of the ESMF. It creates a level ground on which effective working relationships could be built in the implementation process. However, this is a one-off exercise which could be repeated only when the need emerges.

4.3.2 Step 1: Screening

Sub-project screening is the first important step in the ESMF processes that should be undertaken for determining whether or not a project requires ESIA and the level at which the assessment should occur. Environmental Screening will be conducted for each subproject contained in the endorsed annual plan for TRANSIP, having specified site location. The environment and social safeguard specialists in the PIU initiates the process by completing the form contained in Annex a: ENVIRONMENTAL Screening Form.

Screening Principles: Screening of sub-projects can only be carried out after the specific site and location for the sub-project are identified. Conducting field visit to the sub-project site and developing understanding of the biophysical and social environments including the urban setting around the project site is essential to appraise how the sub-project activities will interact with the environment. The aim of the screening form in Annex A is to assist in identifying potential impacts based on field investigations in the area of the subproject site. The screening mechanism seeks to focus on those sub-projects with potentially significant adverse environmental impacts or whose impacts are not fully known. Thus appraisal of the subproject site environment and having adequate level of information about future subproject activities is quit essential to anticipate, identify

and imagine the magnitude of potential impacts which is necessary for conducting the screening exercise. Based on the nature and size of the subproject, the environment safeguard specialist can seek assistance from other members of the PIU while carrying the environmental screening.

The outcome of environmental screening exercise will be classifying the proposed subproject into one of Category B or C. It should be noted that if any of the sub projects may fall under Category A, it will not be eligible for financing by the TRANSIP and will not be proceeded with. Instead it will be subjected to redesign, re-routing or resizing the subproject. The screening report will then be submitted to the Addis Ababa EPA with an official application for review and approval.

The Screening Report will briefly describe,

a) The proposed subproject and its potential adverse impacts,
b) Categorization of the subproject
c) Characteristics of the location (sensitivity of the area),
d) Degree of public interest,
e) Institutional requirement, environmental enhancement and monitoring considerations,

The Addis Ababa Environmental Protection Authority will review the Screening Report and will:

(a) Approve the subproject Categorization and recommend implementation;

(b) Seek for amendment and/or recommend for change on subproject categorization;

(c) Reject the document with comments as to what is required to submit an acceptable Screening Report.

Following the approval of the subproject environmental screening report by Addis Ababa EPA, the subproject will be fed into one of the following processes based on its approved Categorization.

i. Category - B subprojects will require a preliminary ESIA, and will necessitate the inclusion of environmental and social mitigation and enhancement measures in the design and implementation of subprojects.

ii. Category - C projects are not subject to environmental assessment as no potential impacts are anticipated. Thus no further action is required. However, the environmental guideline for construction contractors will be applicable.

4.3.3 Step 2: Category B Sub Projects, ESMP /Preliminary ESIA/ preparation

Category B subprojects will be subject to a limited Environmental and Social impact assessment in order to prepare an Environmental and Social Management Plan (ESMP). The ESMP preparation for the subprojects could be carried out by the PIU with the help of an independent consultant. Category B subprojects are required to prepare "Preliminary ESIA" by the AAEPA in which the depth of its information requirement can be defined in consultation with the Authority. The AAEPA have drafted an outline table of contents that such a preliminary EIA needs to fulfill (see: box-1below). The draft table of content for preliminary EIA is prepared in house by the EIA department of AAEPA and is not a published document. However, it is applied for guiding project proponents in some sectors (e.g. quarry developers) to prepare and submit their preliminary EIA in accordance with it. The table of content, thus, gives an indication as to the level of depth of information required to be contained in a preliminary EIA to satisfy the AAEPA.

As a starting procedure for preparation of the ESMP or "Preliminary ESIA" for the Category B subproject, scoping will be needed. Based on the nature and type of the TRANSIP subproject, the scoping can be carried either by a team of experts or by the environment and social safeguard specialists of the PIU. The main purpose of the scoping exercise is to:

a) establish boundaries of the ESIA study
b) identify the main issues or concerns to be assessed
c) involve and consult potentially affected groups

Following the scoping , preparation of the Preliminary ESIA will be conducted. Generally, the scope of Preliminary ESIA for Category B project is narrower than that of Category-A ESIA. Like Category-A ESIA, it examines the project's potential negative and positive environmental impacts and recommends any measures needed to prevent, minimize, mitigate, or compensate for adverse impacts and improve environmental performance which will be summarised in the ESMP. Undertaking the preparation of the Preliminary ESIA involves:

- A field assessment of the subproject area to identify likely environmental and social impacts;
- Impact analysis
- Consultation with beneficiaries and affected communities;
- Use of the ESMF impact mitigation checklists attached in

- Annex D: Example of Environmental Contract Clauses

CONSTRUCTION ACTIVITIES AND ENVIRONMENTAL RULES FOR CONTRACTORS

The following information is intended solely as broad guidance to be used in conjunction with local and national regulations. Based on this information, environmental rules for contractors should be developed for each project, taking into account the project size, site characteristics, and location (rural vs. urban).

After choosing an appropriate site and design, construction activities can proceed. As these construction activities could cause significant impacts on and nuisances to surrounding areas, careful planning of construction activities is critical. Therefore the following rules (including specific prohibitions and construction management measures) should be incorporated into all relevant bidding documents, contracts, and work orders.

PROHIBITIONS

The following activities are prohibited on or near the project site:

⇒ Cutting of trees for any reason outside the approved construction area;

⇒ Hunting, fishing, wildlife capture, or plant collection;

⇒ Use of unapproved toxic materials, including lead based paints, asbestos, etc.

⇒ Disturbance to anything with architectural or historical value;

⇒ Building of fires;

⇒ Use of firearms (except authorized security guards);

⇒ Use of alcohol by workers.

CONSTRUCTION MANAGEMENT MEASURES

Waste Management and Erosion:

Solid, sanitation, and, hazardous wastes must be properly controlled, through the implementation of the following measures:

Waste Management:

⇒ Minimize the production of waste that must be treated or eliminated.

- ⇒ Identify and classify the type of waste generated. If hazardous wastes (including health care wastes) are generated, proper procedures must be taken regarding their storage, collection, transportation and disposal.
- ⇒ Identify and demarcate disposal areas clearly indicating the specific materials that can be deposited in each.
- ⇒ Control placement of all construction waste (including earth cuts) to approved disposal sites (>300 m from rivers, streams, lakes, or wetlands).Dispose in authorized areas all of garbage, metals, used oils, and excess material generated during construction, incorporating recycling systems and the separation of materials.

Maintenance:

- ⇒ Identify and demarcate equipment maintenance areas (>15m from rivers, streams, lakes or wetlands).
- ⇒ Ensure that all equipment maintenance activities, including oil changes, are conducted within demarcated maintenance areas; never dispose spent oils on the ground, in water courses, drainage canals or in sewer systems.
- ⇒ Identify, demarcate and enforce the use of within site access routes to limit impact to site vegetation.
- ⇒ Install and maintain an adequate drainage system to prevent erosion on the site during and after construction.

Erosion Control

- ⇒ Erect erosion control barriers around perimeter of cuts, disposal pits, and roadways.
- ⇒ Spray water on dirt roads, cuts, fill material and stockpiled soil to reduce wind induced erosion, as needed.
- ⇒ Maintain vehicle speeds at or below 10mph within work area at all times.

Stockpiles and Borrow Pits

⇒ Identify and demarcate locations for stockpiles and borrow pits, ensuring that they are 15 meters away from critical areas such as steep slopes, erosion prone soils, and areas that drain directly into sensitive water bodies.

⇒ Limit extraction of material to approved and demarcated borrow pits.

Site Cleanup

⇒ Establish and enforce daily site cleanup procedures, including maintenance of adequate disposal facilities for construction debris.

SAFETY DURING CONSTRUCTION

The Contractor's responsibilities include the protection of every person and nearby property from construction accidents. The Contractor shall be responsible for complying with all national and local safety requirements and any other measures necessary to avoid accidents, including the following:

⇒ Carefully and clearly mark pedestrian-safe access routes.

⇒ If school children are in the vicinity, include traffic safety personnel to direct traffic during school hours.

⇒ Maintain supply of supplies for traffic signs (including paint, easel, sign material, etc.), road marking, and guard rails to maintain pedestrian safety during construction.

⇒ Conduct safety training for construction workers prior to beginning work.

⇒ Provide personal protective equipment and clothing (goggles, gloves, respirators, dust masks, hard hats, steel-toed and –shanked boots, etc.,) for construction workers and enforce their use.

⇒ Post Material Safety Data Sheets for each chemical present on the worksite.

⇒ Require that all workers read, or are read, all Material Safety Data Sheets. Clearly explain the risks to them and their partners, especially when pregnant or planning to start a family. Encourage workers to share the information with their physicians, when relevant.

⇒ Ensure that the removal of asbestos-containing materials or other toxic substances be performed and disposed of by specially trained workers.

- ⇒ During heavy rains or emergencies of any kind, suspend all work.
- ⇒ Brace electrical and mechanical equipment to withstand seismic events during the construction.

NUISANCE AND DUST CONTROL

To control nuisance and dust the Contractor should:

- ⇒ Maintain all construction-related traffic at or below 15 mph on streets within 200 m of the site.
- ⇒ Maintain all onsite vehicle speeds at or below 10 mph.
- ⇒ To the extent possible, maintain noise levels associated with all machinery and equipment at or below 90 db.
- ⇒ In sensitive areas (including residential neighbourhoods, hospitals, etc.) more strict measures may need to be implemented to prevent undesirable noise levels.
- ⇒ Minimize production of dust and particulate materials at all times, to avoid impacts on surrounding families and businesses, and especially to vulnerable people.
- ⇒ Phase removal of vegetation to prevent large areas from becoming exposed to wind.
- ⇒ Place dust screens around construction areas, paying particular attention to areas close to housing, commercial areas, and recreational areas.
- ⇒ Spray water as needed on dirt roads, cut areas and soil stockpiles or fill material.
- ⇒ Apply proper measures to minimize disruptions from vibration or noise coming from construction activities.

COMMUNITY RELATIONS

To enhance adequate community relations the Contractor should:

- ⇒ Following the country and EIA requirements, inform the population about construction and work schedules, interruption of services, traffic detour routes and provisional bus routes, as appropriate.

⇒ Limit construction activities at night. When necessary ensure that night work is carefully scheduled and the community is properly informed so they can take necessary measures.

⇒ At least five days in advance of any service interruption (including water, electricity, telephone, and bus routes) the community must be advised through postings at the project site, at bus stops, and in affected homes/businesses.

CHANCE FIND PROCEDURES FOR CULTURALLY SIGNIFICANT ARTEFACTS

The Contractor is responsible for familiarizing themselves with the following "Chance Finds Procedures", in case culturally valuable materials are uncovered during excavation, including:

⇒ Stop work immediately following the discovery of any materials with possible archaeological, historical, paleontological, or other cultural value, announce findings to project manager and notify relevant authorities;

⇒ Protect artefacts as well as possible using plastic covers, and implement measures to stabilize the area, if necessary, to properly protect artefacts

⇒ Prevent and penalize any unauthorized access to the artefacts

⇒ Restart construction works only upon the authorization of the relevant authorities.

ENVIRONMENTAL SUPERVISION DURING CONSTRUCTION

The bidding documents should indicate how compliance with environmental rules and design specifications would be supervised, along with the penalties for non-compliance by contractors or workers. Construction supervision requires oversight of compliance with the manual and environmental specifications by the contractor or his designated environmental supervisor. Contractors are also required to comply with national and municipal regulations governing the environment, public health and safety.

- Annex E: Environmental and Social Impact Mitigation and Monitoring Checklists;
- Preparation of an Environmental and Social Management Plan (ESMP)

While developing the ESMP, the design of mitigation measures in the ESMP should seek to:

a) Minimize or eliminate negative impacts,

b) Enhance benefits, and

c) Protect public and individual rights to compensation,

Effectiveness of the ESMP will ensure that appropriate mitigation measures have been employed to avoid and/or minimize any potential impacts resulting from the implementation of the proposed subproject activity. The contents of an ESMP should include:

- A description of the possible adverse effects that the ESMP is intended to address;
- A description of planned mitigation measures, and how and when they will be implemented;
- A description of who will be responsible for implementing the proposed mitigation and enhancement measures
- A description of who will be responsible for monitoring the implementation of the mitigation and enhancement measures
- A program for monitoring the environmental and social impacts of the project, both positive and negative;
- A cost estimate and source of funds.

A monitoring and supervision plan for the ESMP that summarizes key areas on which internal and external monitoring and supervision will focus should be prepared. The Monitoring and Supervision plan should identify the critical risks to implementation of the ESMP and how such risks will be monitored during implementation. The Addis Ababa EPA would advise the implementing agency on its role for carrying out external environmental monitoring and supervision of the ESMP for the Category B (Schedule II) subprojects within the overall plan for the project.

Finally the ESMP for Category B subproject will outline the appropriate budget required to implement measures for mitigation and monitoring. It will also indicate the costs of training and capacity building required. Costs should be calculated based on estimates provided by contractors for any mitigation measures required during the civil works. For example:

- Costs of ensuring the appropriate dust suppression mechanisms are in place during excavation works
- Costs of installing erosion control measures should be estimated as part of the engineering costs; and
- Costs of monitoring noise during construction should be calculated based on the frequency of monitoring and cost of equipment.

The responsibility of preparing the preliminary ESIA is that of the project proponent, which in this case is the AACRTB/TPMO and the steering committee. The cost of conducting the ESIA will be covered by the implementing agency, from the TRANSIP budget allocated for it. The implementing agency will need to procure the services of an independent environmental consultancy service to prepare the ESIAs.

During the study of the Environmental Impact Assessment and Environmental and Social Management Plan the environment safeguard specialist together with other members of the PIU will have to ensure the quality of the assessment by conducting interim review of draft ESIA report submissions..

The completed preliminary ESIA report will then be submitted to the Addis Ababa EPA with an official application for review and approval. Similarly, the ESIA will be sent in parallel to the World Bank for clearance.

The preliminary Environmental Impact Assessment and Environmental & Social Management Plan will then be presented by the PIU environment safeguard specialist and the consultant in collaboration with the project coordinator to the steering committee for further internal review and approval. The completed preliminary ESIA report will then be submitted to the Addis Ababa EPA with an official application for review and approval. Similarly, the preliminary ESIA will be sent in parallel to the World Bank for clearance.

For Category C projects, the application of Environmental Guideline for construction contractors will be important and no further EA action is required.

4.3.4 Step 3A: Review and Decision

The Addis Ababa Regional Environmental Protection Authority will review the ESIAs and ESMPs submitted to it by the implementing agency/PIU/. The purpose of review is to examine and determine whether the ESIA and EMP are an adequate assessment of the environmental effects of the TRANSIP subproject under consideration and of sufficient relevance and quality for decision-making. Reviewing by the Addis Ababa EPA may include considerations of the adequacy of:

- Required information;
- The examination of alternatives, assessment of impacts, appropriateness of mitigation measures and monitoring schemes as well as implementation arrangements;
- The use of scientific and analytical techniques;
- The extent of public involvement and reflection of PAPs concerns; and

The Addis Ababa Environmental Protection Authority will review the ESIA and EMP and may decide to:

(a) Approve the document - with conditions relating to implementation;

(b) Accept the documents with required and/or recommended amendments; or

(c) Reject the document with comments as to what is required to submit an acceptable ESIA and EMP.

After the ESIA is reviewed and approved by the regional EPA, it should be submitted to the World Bank review and clearance.

Content of Environmental Impact Assessment Report for Mining/

Quarrying projects

1. Introduction/Background
2. Objective of EIA
3. Approach/ methodology to the assessment
4. Description of the project site and its environment:
   a) Location (sub-city, woreda, special name, neighbors & X, Y, coordinates)
   b) Landscape i.e. slope, topography, creeks, etc.
   c) Natural resources (river, spring, wetlands, forest & other vegetation) existing in and around the project site & their **distance** from the quarry site .
   d) The previous & existing **land use** of the quarry site and its surroundings: agriculture, Residential, industrial, forest, etc.
   e) socio-economic status of the surrounding community
5. Project baseline information's : geology, potential resource /Reserve estimation
6. Description of the project: area, manpower, machineries, capital ,production capacity, life span
7. Policy, legal and administrative requirements related to environment and mining/quarrying
8. Environmental Impacts of the project :

I. Positive impacts of the project:

Note: Take a commitment to participate youth and women in your project activities i.e number of youth and women who will be benefited from your project.

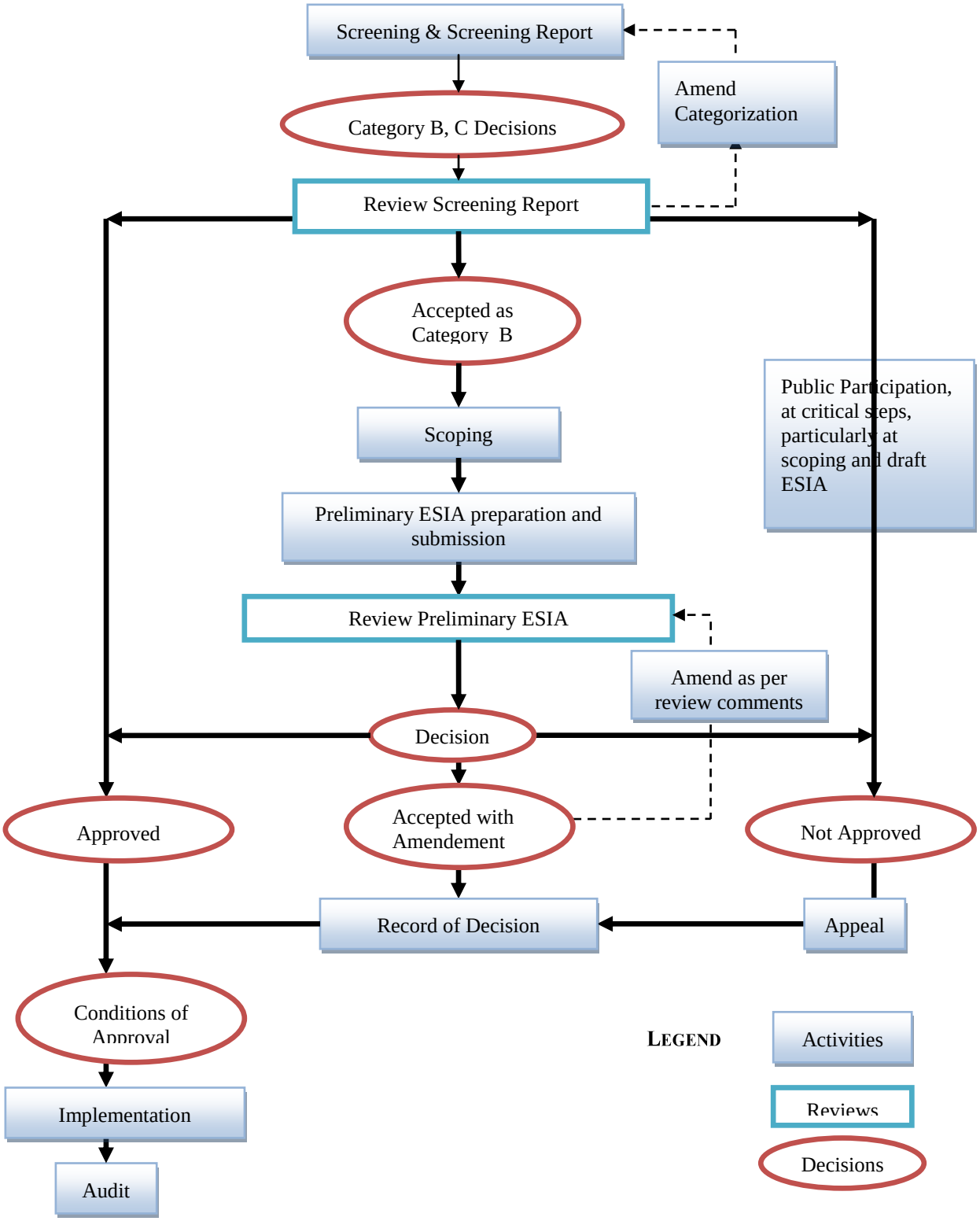
II. Negative impact of the project:

a) Land degradation, erosion, surface irregularity, formation of pits, etc. by quarrying

a) Dust created during crushing and transporting
b) Noise caused by mining /blasting/ crushing & transporting

Box 1: Draft indicative ToC for depth of information required in “Preliminary EIA” (AAEPA, unpublished)

Figure 6: Schedule II, Preliminary ESIA Application Process



4.3.5 Step 3B: Disclosure

In compliance with World Bank guidelines and in the ESIA proclamation, before a TRANSIP ESIA subproject is approved, the applicable documents (Preliminary ESIA (ESMP), CRMP and/or RAP) must be made available for public review at a place accessible to local people (e.g. at a local government office, kebele council, regional bureaus, and at the Regional EPA), and in a form, manner, and language they can understand. Disclosure of the ESIA and RAP in both the World Bank's info shop and website is also a requirement for the TRANSIP.

4.3.6 Step 4: Implementation & Supervision

When approval has been given to the preliminary ESIA/ESMP/, CRMP, RAP implementation of mitigation measures and its systemic follow-up is needed for the sub-project. Supervision and compliance monitoring comprises on site-inspection of construction activities to verify that measures identified in the ESMP, CRMP and/or RAP and included in the contract clauses agreed with contractors are being implemented. Compliance monitoring and supervision of the EMP covers:

- determining whether the project is being carried out in conformity with environmental safeguards and legal agreements;
- ensuring that the anticipated impacts are maintained within the levels predicted,
- identifying problems as they arise during implementation and recommend means to resolve them;
- monitoring that certain unforeseen impacts are identified and mitigated,
- recommending changes in project concept/design, as appropriate, as the project evolves or circumstances change; and
- realizing and optimizing the benefits expected, and
- Providing information for a periodic review and alteration of the environmental management plan and enhance environmental protection through good practice at all stages of the project.

It is therefore necessary that Environmental and Social Management Plan, Cultural Resources Management Plan or Resettlement Action Plan is supervised, monitored and reported on together with other progresses of the subprojects.

As part of the subproject implementation, most of the arrangements regarding design, construction, implementation, and supervision are contained in a legal contract signed between the implementing agency and the contractors. It is critical that the results of the ESIA process (mitigation measures, design specifications, supervision plans, and monitoring arrangements) be duly incorporated into the legal contract. In addition to special measures that may need to be included in the contract, the TRANSIP subproject will find it very advantageous to prepare a standard set of environmental clauses to be included in each contract. If necessary, these could be prepared individually for different categories of TRANSIP subprojects. Examples of contract clauses are provided in Annex D: Example of Environmental Contract Clauses.

Monitoring the compliance of TRANSIP subproject implementation with the mitigation measures set out in its ESMP, CRMP and/or RAP will be carried out internally and externally. Internal monitoring will be mainly conducted by the environment and social safeguard specialists of the PIU who are responsible for environmental and social management. The PIU and in particular the environment and social safeguard specialists will have the primary responsibility for carrying out this monitoring by regularly visiting the subprojects, and pursuing the corrective measures as required. The supervision and monitoring to be conducted on the ESMP should focus on the critical risks to implementation of the ESMP. On the other side, the construction contractor should also assign a supervisor to conduct its own internal monitoring on the implementation of those mitigation measures included in the signed contract through environmental clauses.

The implementation of the recommended mitigating measures will also be monitored externally by the Addis Ababa Environmental Protection Authority. The PIU environment and social safeguard specialists will have to collaborate with the Addis Ababa Regional Environmental Protection Authority in the planning for external compliance monitoring inspections. The planning for external compliance monitoring/inspection could be initiated by AAEPA itself or (if that is not coming forward from AAEPA side) by the implementing agency/PIU/ in line with the M&E system.

4.3.7 Step 5: Annual Environmental Reports

Once implementation of the TRANSIP subproject has started, regular supervision missions will be carried out by the implementing agency PIU as described in the preceding section.

An annual environmental report must be compiled and submitted by the PIU to AACRTB and the Steering Committee for submission to the Regional EPA and World Bank for review.

The purpose of the annual report is to provide:

- A record of TRANSIP project activities, experience and issues running from year-to-year throughout the TRANSIP that can be used for identifying difficulties and improving performance; and
- Practical information for undertaking an annual review.

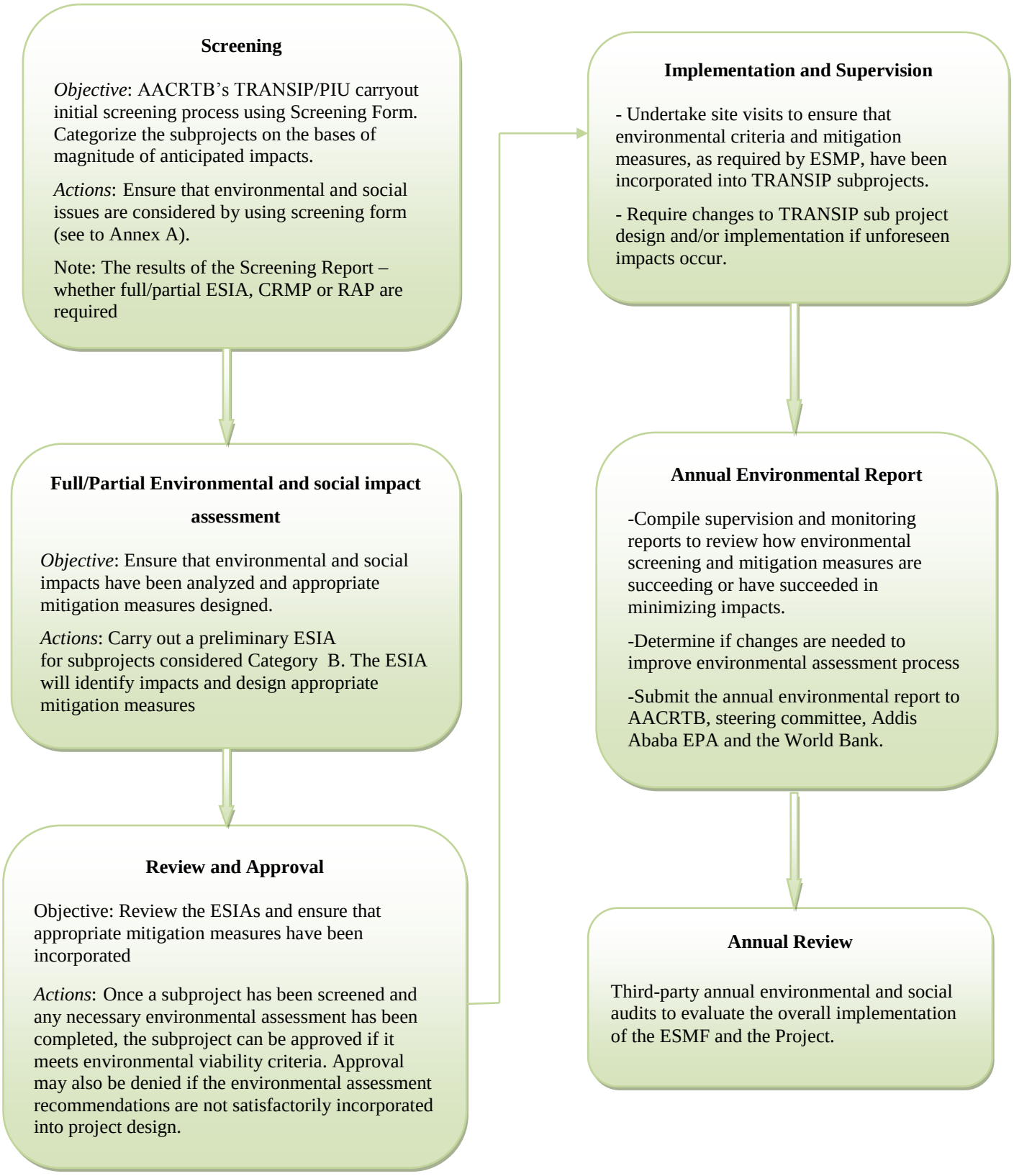
4.3.8 Step 6: Annual Reviews

ESMF implementation will also be supported by conducting annual environmental and social performance audit (including audit of implementation of ESMPs, CRMPs, RAPs and ARAPs) that will be carried out by a third party. The third-party annual environmental and social performance audits will be conducted on the TRANSIP project to evaluate the overall implementation of the ESMF and the Project. The annual environmental and social performance audits will be considered to be the principal source of information to Project management for improving performance, and to Bank supervision missions. It is expected that these reviews will be carried out by an independent local consultant or other service provider that is not otherwise involved in the Project. The purpose of the reviews is two-fold:

- to assess compliance with ESMF procedures, learn lessons, and improve future ESMF performance; and
- to assess the occurrence of, and potential for, cumulative impacts due to Project-funded and other development activities.

Format for Annual Environmental Report is appended in Annex C.

Fig 7: Diagram showing the ESMF process flow



4.4 SUB-PROJECTS REQUIRING A SPECIAL PROCEDURE AND GUIDELINES

4.4.1 Projects involving Asset Acquisition or Loss of Access to Assets

It may appear that a subproject might involve involuntary loss of assets or access to assets. The World Bank's policy on involuntary resettlement (OP 4.12) applies to all land acquisition and any changes in access to resources due to a subproject. The policy aims to avoid involuntary resettlement to the extent feasible, or to minimize and mitigate its adverse social and economic impacts.

This policy covers not only physical relocation but any loss of land or other assets resulting in: (i) relocation or loss of shelter: (ii) loss of assets or access to assets; (iii) loss of income sources or means of livelihood, whether or not the affected people must move to another location. This policy also applies to the involuntary restriction of access to legally designated parks and protected areas resulting in adverse impacts on the livelihoods of the displaced persons. The policy prescribes compensation and other resettlement measures to achieve its objectives and requires that borrowers prepare adequate resettlement planning instruments (RAP or ARAP) prior to Bank appraisal of proposed subprojects. In the event that there are differences between national legislation and OP 4.12, the provision of the later will prevail during project implementation.

4.4.2 Projects Involving Physical Cultural Resources Management

If there is a possibility that subproject construction or other activities may result in damage to cultural property, procedures for avoiding such damages should be followed. As an integral part of the ESIA process, the implementing agency should develop a Physical Cultural Resources Management plan (CRMP) that includes measures for avoiding or mitigating any adverse impacts on physical cultural resources and provisions for managing chance finds. The measures will need to be integrated into the ESMP to address the issues of avoiding damage to cultural properties. It is important that the ESIA identify the specific procedures for addressing impacts on cultural property of a given subproject.

The CRMP in the ESMP should be consistent with Proclamation No 209/2000 on Research and Conservation of Cultural Heritage, the World Bank OP 4.11 for Cultural Property, and should take into account institutional capabilities relating to the management and preservation of physical cultural resources.

The procedures to avoid damage to cultural property would include:

- Consultations with the appropriate authorities and local inhabitants to identify known or possible sites during subproject planning;
- Relocating of subprojects to avoid identified heritage sites; and
- Enforcing construction procedure for dealing with "chance finds". These procedures includes cessation of work and reporting to Addis Ababa City Culture and Tourism Bureau and protecting and keeping the chance find heritage intact until the Bureau takes delivery thereof and until fitting treatment of the site has been determined and carried out.

4.4.3 Solid Waste Management Action Plans

During project implementation, it may appear important to integrate street cleansing activities along the selected road corridors for improvement with the overall City or sub city solid waste management plans. The Solid Waste Management Proclamation No. 513/2007 states (Article 5.1) that Urban Administrations shall ensure the participation of the lowest administrative levels and their respective local communities in designing and implementing their respective solid waste management plans. In Article 5.1 each Region or urban administration shall set its own schedule and, based on that, prepare its solid waste management plan and report of implementation. Further information on preparation and implementation of solid waste management plans may be obtained from the Regional Environmental Protection Authorities and MoEFCC.

5 GUIDELINES ON IMPACT MITIGATION AND MONITORING

This chapter describes the potential environmental and social benefits and impacts of the TRANSIP subprojects and outlines the measures that will be implemented as part of the TRANSIP ESMF to address adverse potential impacts.

5.1 OVERALL SOCIAL AND ENVIRONMENTAL BENEFITS AND IMPACTS

The TRANSIP infrastructure subprojects to be implemented by AACRTB/ACCRA are likely to deliver a wide range of social and environmental benefits. These will include employment generation, accessible and affordable transport, fuel economy, various

economic benefits, and reduced pollution and improve welfare of the city residents in many ways.

Specific socio-economic benefits include:

- Demand for skilled and unskilled labour;
- Increase in income for local communities; and
- Indirect employment opportunities from provision of services to construction workers, such as sale of food and beverages.

In some cases, there may be risks of the permanent or economic displacement of people, requiring preparation and implementation of RAP.

5.2 SOCIAL BENEFITS OF TRANSIP SUBPROJECTS

A. Employment

The TRANSIP subprojects will provide employment opportunity during design and construction phase. Subproject such as road pavement construction and maintenance, construction of traffic control centre and installation of traffic signal systems, e.t.c. will have short term positive impacts on the socio-economic environment as they provide employment for labourers.

It is known that due to the limited public transport, the mobility of the people within Addis Ababa city is very limited. The weak access to mobility in turn has affected the people by reducing their access to the economic opportunity of the City. Thus, in the long term, the improved road conditions, improved traffic congestion and flow, and improved urban transport systems that will be realized by the TRANSIP project will provide increased access, mobility and affordability for the general public including its active working force in the city. This in turn enhances their opportunity to access markets and production platforms which can improve the overall employment situation. Improvement of the public transport system will also have a positive potential impact to the city population in assuring equitable accesses to the socio-economic opportunities the City offers. People will have access to the economic activity of the City from almost every corner to any corner.

B. Incremental reduction in Air pollution of the City

Air pollution phenomenon is observed to rise from year to year in Addis Ababa City. Some studies conducted in the city have shown that vehicular emission is one of the important sources of air pollution of the City. The traffic flow in Addis Ababa is predominantly characterized by intermittent flow---where there is frequent stop and go during most of the day and almost throughout the City. In this regard, the contribution of vehicular emission to air pollution could be exacerbated not only by increased number of automobiles on the streets, but also by decrease in average speed of vehicles mainly due to traffic build up causing traffic jams. Experiences elsewhere show that the result of the reduction of the average speed of vehicles, mainly due to traffic build up, is a marked increase of pollutants' emissions from vehicles. At low speeds a dramatic increase of CO and HC for gasoline-fuelled vehicles is noticed as well as an increase of NO for diesel-fuelled vehicles.

The key to substantially reducing vehicular emissions over the long term will be an effective transport planning and management system, which the TRANSIP project is aiming to achieve in Addis Ababa. The TRANSIP project will provide adequate management of traffic and will facilitate for smooth traffic flow. The achievement of this goal will have a significant incremental positive impact on the state of air pollution by reducing emissions from idly running and low speed engines. Moreover, the improvements in vehicle standards and inspection systems to be achieved by Component C of the TRANSIP project may greatly reduce vehicle emissions.

C. Enhanced Public Safety

Lack of adequate walking facilities along the roads coupled with inefficient traffic control and management systems have led to poor safety conditions and frequent traffic accidents in the City. Had there been an efficient traffic management and control system in place, it would have been possible to reduce at least some of the accidents. The traffic management subprojects together with the pavement improvement & pedestrian overpass subprojects will have strong positive impact in the improvement of the traffic flow of the city, which in turn will bring positive change through reduction of road accidents (which is severely reducing life expectancy, creating social disruption of families, and causing economic losses). Thus, the TRANSIP project is anticipated to have a significant potential positive impact in enhancing public safety by reducing road accidents.

D. Improvement of environmental health

According to the CSA (2006/2007), as quoted in unpublished report titled: '*The issue of Air Pollution in Addis Ababa*' compiled by the AAEPA, acute upper respiratory infection is ranked first among the ten top leading causes of morbidity in the city of Addis Ababa for five consecutive years, while on the other hand several studies show that poor air quality is one of the causes of such disease or infection. Even though, researches that directly correlate the effect of air pollution and in particular vehicular emissions on public health in Addis Ababa city is scares, indirect indications are that air pollution is taking its toll on public health. Therefore, any incremental reduction on vehicular emissions which is one of the major air pollution sources in the City is anticipated to have a potential positive impact on the improvement of the environmental/public health status of Addis Ababa City. As a result the implementation of the TRANSIP subprojects is anticipated to have a positive outcome in improving environmental health.

E. Improving the aesthetic appeal of the City

Implementation of the complete street concept on the selected five road corridors is anticipated to have a positive potential impact on the attraction and aesthetic appeal of the city. Subprojects that work on installing street furniture coupled with pavement/walkway construction and improvement are predicted to have the potential of positively changing the street scenery with implications to improve the attraction and beauty of the urban places. Thus it is anticipated that the urban infrastructure subprojects contained within the complete street concept will positively contribute to the aesthetic beauty of the city and will enhance the welfare and quality of life of the resident community.

F. Improved access to basic services

One of the envisioned goals of the TRANSIP project is that the transport system (public transport and traffic flow) of Addis Ababa city will be reliable, accessible, affordable, comfortable and safe. Achieving this goal will also provide an opportunity for the people to easily access the urban services (health, education, and others) and will have more time for other activities because of the saved travel time. This will be another potential positive impact that will arise from the TRANSIP project having implications on enhancing access to social and other basic services.

F. Effective utilization of fuel

The problem of traffic flow is also a cause for unproductive and perhaps unnecessary economic lose. Idly running engines trapped in traffic jam and congestion consumes more fuel and is exposed to wear and tear due to the erratic traffic flow which also shortens its life time. The extra unproductive fuel consumption of idly running engines and deteriorating condition of the vehicles has a direct negative implication by aggravating the foreign currency spending of the Country on such items. Thus improving the traffic management systems of the city will have the potential to incrementally reduce fuel consumption of idle running engines and change it into effective and productive use. This in turn will have a positive implication on the effective use of fuel and car spare parts purchased in foreign currency.

G. Avoidance of damaging floods in urban areas

Urban drainage subprojects have the potential of minimizing flooding impacts in the City. Floods can have devastating social and economic consequences, limiting communities in terms of access, sustainable production and income streams. Addressing the problem of floods through drainage infrastructure improvements can have a significant impact on livelihoods, sustainability and productivity.

H. Multiplier effects of providing integrated infrastructure and services

Provision of improved road infrastructure services make available serviced land for construction of residential, commercial and industrial – including MSE – facilities by governmental authorities as well as communities, NGOs, real estate developers, private individuals, cooperatives, etc. The potential multiplier economic effects are considerable in a broad range of examples from employment generation, productive investment in MSEs, industry and services, to the generation of increased city revenues.

5.3 ADVERSE ENVIRONMENTAL IMPACTS

The following are the potential adverse environmental impacts that can be envisaged of TRANSIP-financed subprojects. Further details are provided in the guidelines in Annex E: Environmental and Social Impact Mitigation and Monitoring Checklist.

A. Land take for infrastructure sites and gathering of construction materials

The construction of infrastructures such as expansion of road pavements, pedestrian overpasses, traffic control centre and traffic light facilities, e.t.c will require land and may displace people from their work places. It is unlikely, but nonetheless possible, that the small-scale construction subprojects will result in any displacement. In addition, the sourcing of construction materials (gravel, sand etc) from borrow pits and quarry sites in the rural areas adjoining the towns can also result in the complete removal of vegetation. Therefore, in addition to the displacement of people, the infrastructure projects may result in the loss of vegetation. The exact location of the subproject and the management of the sourcing of construction materials are the key issues here.

B. Dust and noise during construction

The likely potential impacts that are anticipated to arise during construction phase of the TRANSIP subprojects is release of noise and dust during mobilization and operation of heavy duty vehicles and other equipments. The potential impact of noise depends not only on its level but also on the proximity of residential areas to the site. Noise is attenuated with distance (by about 6 dB every time the distance is doubled), although lower frequencies are attenuated to a smaller extent than higher frequencies. The proposed road improvement corridors are situated in the core commercial and residential areas. Therefore, the presence of noise sensitive receptors around the construction sites will make the impact to be significant to the public around the subproject sites. According to the provisional noise standards of the MoEFCC (2002), the permissible noise levels in commercial and residential areas are 65db and 55 db respectively for day time. For occupational safety purposes, the Ethiopian Ministry of labor and social affairs usually applies internationally accepted standards of the ILO which is 90db for eight hours working time.

C. Light Pollution

Light trespass can be described as the effects of light or illuminance that strays from its intended purpose. On a street lighting system it is desirable to have all the light directed onto the roadway and not on the adjacent area. Poor quality lighting fixtures will allow some of the light to fall on areas away from the road such as houses. For some people any amount of obtrusive lighting is considered an annoyance. People get upset by the stray light that enters their property or windows.

Various different light sources for street lighting exhibit different color characteristics. Mercury vapor luminaires produce a white, full spectrum light, which is pleasing to designers, architects, and town planners. The problem with mercury vapor luminaires is that they are very energy inefficient and environmentally unfriendly due to the mercury vapor compared to some of the other sources. High pressure sodium luminaires produce the familiar yellow light used by most street lighting installations today. The HPS luminaires are about twice as energy efficient for the same lumen output as mercury vapor and are better for the environment. Metal halide luminaires produce a full spectrum light similar to mercury vapor and give good color rendition which makes it preferable as compared to the later in terms of environment friendliness.

LEDs (light emitting diode) contain lead, arsenic and a dozen other potentially dangerous substances. Crews dispatched to clean up broken traffic lights (LEDs are used extensively for traffic lighting) should wear protective clothing and handle material as hazardous waste. LEDs are currently not considered toxic by law and can be disposed of in regular landfills.

D. Utility Disruption Impacts

The construction activities of pavement, drainage and traffic light subprojects may likely affect existing utility lines during excavation on the right of way. Construction activities usually require re-alignment of utility supply lines such as water, sewerage lines, telephone and electricity. Unless prior coordination is made between the subproject implementer and the utility offices, the excavation activities may result in disruption of water supply, sewerage, electricity and telecom services in the subproject site area. The interruption of utility services will negatively affect the residential homes and businesses in the area. Therefore, in order to avoid such negative impacts a coordination mechanism between utility offices and the project implementer need to be established before commencement of subproject implementations.

E. Impacts on Public Health (water-borne and communicable diseases)

TRANSIP subprojects such as construction and operation of drainage lines can become an issue of public health concern when it is not functioning properly. The excavation of trenches for drainage lines may form stagnant water ponds and these ponds can be the source of health risks to the local people by serving as a favourable breeding site for communicable waterborne disease causing parasites. If drainages lines are not properly

covered by concrete slabs or other materials, it can also be a cause for physical damage for both humans and domestic animals. A well designed and maintained drainage line has the capacity of removing runoff waters from the residential areas before it stagnates. Under such circumstances the drainage lines subproject will have a significant positive potential impact on public health by minimizing the spread of waterborne diseases.

On a similar note, construction activities of subprojects can damage and break existing sewerage lines causing the release of raw sewage into the open environment. Under such circumstances, the released raw sewage becomes an immediate public health issue when it flows through residential or commercial places. Therefore, as stated earlier, a coordination mechanism between utility offices and the project implementer need to be established before commencement of subproject implementations to avoid the occurrence of such undesirable public health concerns.

F. Damage to cultural heritage during construction operations

Addis Ababa is home to a number of historical buildings and monuments. During construction phase of certain subprojects such as pavement expansion and construction, cultural or archaeological heritage may be damaged or lost during excavations. In addition, findings of archaeological heritage during excavations will be at risk of loss, unless due measures are taken to protect and save this heritage.

G. Impacts of used oil and lubricants

Used oil and lubricants released from vehicle maintenance workshops would negatively affect surface and ground water resources. It is one of the major impacts arising from garages, oil and fuel depots, and other automotive assembly lines. These impacts could be avoided by ensuring that all equipment maintenance activities, including oil changes, are conducted within demarcated maintenance areas and collecting it into a container system which facilitate for further treatment. It is important that spent oils are never disposed on the ground, in water courses, drainage canals or in sewer systems.

H. Depletion and pollution of surface-and ground-water resources

Drainage systems in the urban core areas to divert flood water could have a significant adverse environmental impact on water courses, resulting in pollution with solid waste debris, wastewater, and silt, and thereby a significant reduction in the human and

ecological value of the water course. Water will be required for construction purposes, placing greater demand on both surface and groundwater resources. Over-extraction of groundwater is a concern.

I. Disposal of solid wastes from improved road corridors

During operational phases of TRANSIP subprojects such as the improved road corridors installed with street furniture, it is likely that a stream of solid waste will be generated by the community using the street side sits and waste bins. A proper solid waste management practices should be put in place to clean the streets and to regularly collect the waste from the street side waste bins to avoid the associated adverse environmental and public health impacts that may arise from such unattended street facilities. Such waste management practices will involve integrating the street furniture facilities with the waste collection services and the schemes available in the sub cities.

J. Removing street vegetation

Many streets in Addis Ababa have vegetation (i.e. trees, shrub & grasses) on its sides, middle sections and on the roundabout. Construction activities of pavements, pedestrian overpasses, and traffic light signals e.t.c may remove some of the street vegetations negatively affecting the beauty of the street itself and the vegetation cover of the city as well. Measures need to be put in place to avoid unnecessary cutting of street trees and devise mechanisms to minimise the impacts on street vegetation. Rehabilitation and re-vegetating works on the streets needs to be done to restore and enhance further the lost vegetation.

K. Traffic Disruptions Diversion and Safety Impacts

During TRANSIP subproject works, some roads and pavements may be temporary closed for traffic including pedestrian. This temporary blockage may affect the movement of people by blocking their daily routes. There can be serious disruptions to local traffic. The situation can be aggravated without carefully planned detours and road closures. The effect of traffic disruptions includes increased travel time, congestion, traffic accidents, social stress and agitations.

Alternative temporary passes need to be identified and opened first prior to commencement of construction works of subprojects. In addition increased construction activity along the

roads and pavements coupled with vehicular movement can be dangerous and cause accidents to site workers and the general public. Road pavements that are not designed or constructed to strict engineering standards can be very difficult and problematic and may not address the special needs of the elderly, disabled, women and children. The IFC EHS guidelines also has contained useful mitigation options under section 3.4 on Traffic safety and section 4.3 on Community health and safety which can be applied by adopting to subproject context.

5.4 CUMULATIVE IMPACTS OF THE PROJECT

TRANSIP may individually have insignificant adverse environmental impacts. However, several projects in combination, or in combination with other government or private sector activities, could have a larger, more significant cumulative impact. This is particularly likely to be the case for:

- Deforestation due to the exploitation of forest resources, owing to the use of timber and poles for construction, combined with greater access to forests;
- Groundwater depletion owing to the demand for water for construction;
- Surface water depletion, owing to the generation and disposal of solid and liquid waste streams.

In addition, resettlement due to the acquisition of land for infrastructure projects may combine with induced migration of people (for labour, services etc) to place greater pressure on natural resources in particular areas. The avoidance and mitigation of cumulative impacts requires: avoidance and mitigation of the impacts of individual projects; careful planning, based on sound technical knowledge of the location, size, and material requirements of infrastructural projects, within the City and regional planning cycles.

6 TRAINING AND CAPACITY BUILDING

6.1 INSTITUTIONAL CAPACITY ASSESSMENT

The institutions responsible for implementing the various components and subcomponents of the TRANSIP project are outlined in chapter 3. Clearly the implementation arrangement of the TRANSIP depends on all the sector offices of the City Administration for they are involved directly as implementers and beneficiaries of the TRANSIP subprojects (e.g. AACRTB, AACRA, Anbessa City Bus Transport, PIU e.t.c). On the other side, the role of the environment regulatory agency in implementing the TRANSIP ESMF and RPF is unavoidably important. Therefore, it is necessary that a sound understanding of the ESMF and dependable level of capacity exists in these institutions that would enable the implementation of the present ESMF and RPF instruments. From this perspective, the following observations were made regarding the existing capacities in the institutions during the consultations carried out with the stakeholders and local community representatives:

a. The TRANSIP implementing agencies such as AACRTB, AACRA, Anbessa City Bus, and others found at the City Administration level appears to be new for the ESMF/RPF process and have neither the experience nor the capacity to become conversant and to facilitate implementation of the associated procedures outlined in the ESMF and RPF. The same appears to be true with the Federal Transport Authority which is the implementing agency mainly for component C of the TTRANSIP project. However, the Project Implementation Unit (PIU) have employed environmental and social safeguard specialists who are experienced in applying similar ESMF and RPF procedures in other World Bank funded projects.

b. The Addis Ababa City Environmental Protection Authority (AAEPA) appears to have the institutional standing necessary to play its role as regulatory body. The AAEPA have ratified the regional version of the basic environmental laws such as the Environmental Impact Assessment (Reg No. 21/2006) and Pollution Control regulation (Reg no.25/2007) and have a department responsible for environmental impact assessment reviews. The EIA department is currently staffed with four experienced experts, though its organizational structure allows up to seven staff.

The AAEPA has developed a certain level of experience in administering the EIA laws on project proponents, conducting reviews and compliance monitoring with associated EMPs. The Authority has also been exposed to the ESMF and RPF procedures and to its role as regulatory body during the implementations of ULGDP I project and the ongoing Bole Lemi and Kilinto Industrial Zone development projects.

However, despite its efforts to discharge its responsibilities as regulatory body, it was explained in the stakeholder consultation that the Authority has serious gaps in capacity that constrain it to conduct environmental monitoring and inspection which is necessary to follow up the compliance of projects with its EMPs. The capacity gaps include lack of training, lack of equipment for noise monitoring, air quality monitoring and e.t.c. It also involves lack of transport and related logistical resources to discharge its regulatory responsibilities in full.

Therefore, there is going to be a need to fill in the capacity gaps identified to exist in the above stated areas for all the institution involved in the TRANSIP ESMF and RPF implementation.

6.2 TRAINING REQUIREMENTS

One of the capacity building areas sought for by the implementing agency and different stakeholders involved in the implementation of the TRANSIP projects is the provision of training. The training to be offered will address different target groups which will have a role in implementing the ESMF and RPF at various levels. These include the high level project coordination and management group (such as members of steering committees), relevant staff of the implementing/beneficiary offices, the PIU staff, the beneficiary communities and related local authorities, and the regulatory bodies (e.g. AAEPA and BoLSA). As a result, the type of trainings necessary to these various target groups will vary and is briefly outlined as follows:

a. Sensitization

The beneficiary communities at the grass root level and related local authorities will need to be sensitized about the overall objectives of the TRANSIP project including the its subcomponents, environmental sustainability and the need to consider environmental

concerns in sub-project selection and prioritization, as well as the role of public participation in the implementation of the TRANSIP program.

b. Awareness raising

Awareness raising workshops are necessary to conduct immediately after launching the project and as the need arise at later stages. The awareness raising workshops and trainings should target the higher officials, TRANSIP project management and coordination organs including the steering committee members, AACRA, AAEPA and BoLSA executives, and e.t.c. The awareness raising should focus on clarifying TRANSIP project objectives, its institutional arrangements for implementation, coordination, its work flow to the lower level of the administrative strata at the implementing agency and so on. It is important to clarify the roles and responsibilities of each stakeholder based on established guidelines such as the ESMF and RPF. The awareness raising workshop will also be an important venue to introduce the contents of ESMF and RPF procedures and associated implementation requirements of the World Bank and the GoE.

c. Technical training on ESMF and RPF

This detailed training will mainly focus on the technical staffs that will be involved in directly applying the ESMF and RPF procedures. It includes the experts in PIU, relevant technical/professional staff member in beneficiary/implementing agencies (e.g AACRA, TPMO, e.t.c), and relevant technical/professional staffs from the regulatory bodies (e.g: AAEPA, BoLSA e.t.c). The training will focus on explaining the details of the national and World Bank environmental requirements and the procedures that need to be fulfilled to comply with it. Implementation of the ESMF and RPF including all aspects of environmental management, ESIA, public consultation, and integration of environmental management into development planning will be the centre topics for the training. The training would also cover skills upgrading refreshment topics such as, environmental and social screening and categorization processes, ESIA review and quality assurance, environmental audits, environmental guidelines and others as necessary.

Table 8 : Training Requirements for Various Groups of Participants

	High Level Project Management and coordination	*Regional Environment Authorities*	*CPU, PFU, Technical Team Members*	*Community Leaders/ beneficiaries*
Linkages between environmental, social and natural resource management and sustainable rural livelihoods	***A***	***T***	***T***	***S***
National/Regional ESIA legislation and relevant World Bank Safeguard environmental policies	***A***	***T***	***T***	***S***
Potential localized impacts of subprojects and suitable mitigation measures	***A***	***T***	***T***	***S***
Addressing land acquisition and access to resources through resettlement planning and compensation	***A***	***T***	***T***	***S***
Use of the ESMF, its procedures, resources and forms	***A***	***T***	***T***	***A***
Methods of community involvement	***A***	***T***	***T***	***A***
Cumulative impacts assessment	***A***	***T***	***T***	***A***
	A	***S***	***T***	***A***
Legend: ***T*** *= Detailed training,* ***S*** *= Sensitisation to the issues,* ***A*** *= Awareness-raising*				

6.2.1 Proposed Environmental Management Topics

The ESMF, RPF and Operational manuals of the TRANSIP are important tools that provide guidance on how to incorporate mitigation measures and to minimize adverse effects of sub-projects. The capacity building efforts for the implementing agency, technical committees to be involved in undertaking an in-house reviewing of full/partial ESIAs of TRANSIP projects should take place in conjunction with dissemination of these materials. These documents will serve to guide the selection of sub-projects, and will be essential in managing potential environmental effects at early stages of the project life-cycle. Staff of the implementing/beneficiary institutions involved and the regional monitoring and evaluation staff will receive training based on these materials.

Training materials will be kept under constant review and revision by the AACRTB/PIU, including enhancing of the communication aspects. The training includes:

6.2.1.1 Introduction to Environmental and Social Management Framework

This section will introduce participants to the theory and application of ESMF as a decision making tool. It will outline the principles of ESMF and provide clear definitions on EMP practice terminology (e.g. screening and scoping, impacts [negative, positive, cumulative] natural resource base (water, soil, land, biodiversity, air, etc.), social baseline (employment, social, health, literacy etc.) and mitigation and monitoring. It will also provide guidance on the criteria required for the development of an effective ESMP in practice.

6.2.1.2 Ethiopian Environmental Legislation.

This section will discuss the application of Ethiopian legislation in terms of the relevant environmental and social laws and policies which apply to activities under the project.

6.2.1.3 Screening of TRANSIP subprojects

A list of potential activities to be financed under the projects will be discussed. Application of the screening checklist will be explained using case studies.

6.2.1.4 Impact Identification

Potential impacts related to various types of activities will be discussed, in terms of their significance (adverse or minimal, positive or negative), magnitude (long term versus short term), and impact category (localized or cumulative).

6.2.1.5 Mitigation measures and Implementation Monitoring

Different mitigation options as it applies to various types of TRANSIP activities will be discussed, in terms of their application, cost and feasibility. The importance of monitoring measures will also be discussed to measure the effectiveness of mitigation plans and to monitor performance.

6.2.1.6 Responsibilities for Planning and Reporting

For each target audience, responsibilities for environmental and social management will be discussed as they relate to TRANSIP project implementation. This will include responsibilities for planning, management of impacts and mitigation measures, monitoring, partnerships with NGOs and technical service providers, and the reporting of outcomes achieved in implementing the mitigations as well as monitoring plans.

6.2.1.7 World Bank Safeguards Policies

Detailed application of the safeguard policies on Environmental Assessment OP/BP 4.01, Involuntary Resettlement OP 4.12, and Cultural Property (OP 4.11).

Integrating environmental and social considerations into development planning will encompass defining processes, procedures and responsibilities for environment related activities and actions into the preparation of the TRANSIP annual development plans and budgets. ***Thus there will be a need to carry out Environmental awareness and outreach programs for the Addis Ababa City officials and local communities on sustainable development and environmental management principles and ESMF procedures.***

Training to PIU, technical staff, environmental officers, local administration and line agency staff at Addis Ababa City level (i.e. relevant Sub city and Woreda administration officers, Labour and social affairs officers, Women, youth and children affair office representatives, e.t.c) on issues of environmental and social considerations, is required in the form of a phased training. This general training program will be developed as a training module based on TRANSIP ESMF and RPF, safeguard guideline and checklists.

6.3 TECHNICAL AND FINANCIAL ASSISTANCE

Owing to the expressed capacity gap by the AAEPA to conduct environmental monitoring and inspection which include lack of equipment for noise monitoring, air quality monitoring, as well as lack of transport and related logistical resources to discharge its regulatory responsibilities in full, there appears necessary to provide financial support for the Authority to enable it to acquire the facilities and build its capacity for monitoring and inspection of subprojects.

Provision of the following technical assistance will be important for the implementing agency (AACRTB):

a) Technical and financial assistance to the implementing agency to secure local consultancy services, where the implementing agency does not have internal capacity or this cannot be provided by the AACRTB, to:

- Produce a Screening Report, an ESIA TOR, an Environmental Impact Assessment, Environmental Management Plan, Cultural Resources Management Plan or full/abbreviated Resettlement Action Plan; and
- Establish and support operation of systems for monitoring and reporting on ESIA, EMP, CRMP and RAP implementation.

b) Appointment of environmental and social safeguard specialist in the PIU responsible for overall ESMF & RPF implementation at the City Administration level.

The Environmental and Social Specialists in the PIU will contribute to the objectives of the Project which include:

- The preparation, together with the implementing entities, of annual work programs and budgets to fulfil ESMF requirements of subprojects;
- Monitoring project progress as it relates to compliance with the ESMF guidelines, resolving implementation bottlenecks, and ensuring overall implementation of ESMF in such a way that project implementation proceeds smoothly;
- Collecting and managing information relevant to the subproject environmental management works (i.e. environmental monitoring and audit reports – of EMPs, CRMPs, RAPs and ARAPs); and
- Ensuring that the implementing bodies are supported adequately and that they adhere to the principles of the project, specific to compliance with ESMF guidelines.

6.4 TERMS OF REFERENCE FOR TRANSIP ENVIRONMENTAL AND SOCIAL SPECIALIST

OBJECTIVE: To provide technical advice on environmental management and mitigation, and ensure that the TRANSIP ESMF is fully implemented.

TASKS

- Establish the system of screening forms and ESIA as set out in this ESMF, and conduct the screening of subprojects,
- Advice to implementing agency on the procurement of consultants for preliminary ESIA or RAP studies as required;

- Prepare annual work programs and budgets to fulfil ESMF requirements of subprojects;
- Monitor project progress as it relates to compliance with the ESMF guidelines, resolving implementation bottlenecks, and ensuring overall implementation of ESMF in such a way that project implementation proceeds smoothly;
- Collecting and managing information relevant to the subproject environmental management works (i.e. environmental monitoring and audit reports – of EMPs, CRMPs, RAPs and ARAPs); and
- Ensure that the implementing bodies are supported adequately and that they adhere to the principles of the project, specific to compliance with ESMF guidelines.
- Conduct supervision and implementation monitoring of mitigation measures proposed in ESMPs of subprojects
- Prepare regular and periodic environmental performance reports on subproject
- Liaise with the AAEPA on a regular basis;
- Provide specific technical advice on mitigation measures for subprojects;
- Provide technical advice to implementing agency on all technical issues related to natural resources and environmental management. These issues will relate to impacts on surface water, groundwater, natural resources and vegetation, sourcing of materials used in construction, human health, ecology and protected areas, land and soil degradation;
- Raise awareness and proactively create demand for this technical advice among stakeholder/beneficiary institution officers;
- Liaise with the implementing agency to ensure the project's compliance with the ESMF/RPF and all resettlement aspects of the project;
- Be responsible for collating information related to the ESMF/RPF and resettlement;
- Undertake review of preliminary ESIA and RAPs to ensure compliance with the ESMF and RPF; and
- Lead the delivery of capacity building programs on Environmental management for stakeholder officers.

7 MONITORING OF ESMF IMPLEMENTATION

Annual report on ESMF and RPF implementation will be prepared by the PIU Environmental and Social Specialist and delivered to AAEPA and the World Bank. In addition, any Category B subproject financed by TRANSIP that has been subject to an ESIA study (or RAP etc) will also be required to produce an annual audit report, for delivery to AAEPA and the World Bank.

An independently-commissioned environmental and social audit will be carried out on an annual basis. This will be conducted as part of AACRTB annual audit of the TRANSIP project. The audit team will report to the AACRTB and the World Bank. An audit is necessary to:

a) indicate to what extent environmental and social considerations are being incorporated into the AACRTB planning process;

b) asses that mitigation measures were being identified and implemented by the implementing agency, and

c) ensure that TRANSIP subprojects were being correctly screened.

d) identify any amendments in the ESMF approach that are required to improve its effectiveness.

The annual audit also provides a strong incentive for AACRTB to ensure that the ESMF is implemented. It will help to ensure that individual EMPs, CRMPs and RAPs are developed and implemented for Schedule 1 and 2 subprojects. The annual audit Report will include:

- A summary of the environmental and social performance of the TRANSIP based on a sample of subprojects;
- A presentation of compliance and progress in the implementation of the project EMPs, CRMPs and RAPs;
- A synopsis of the environmental monitoring results from individual project monitoring measures (as set out in the project EMPs, CRMPs and RAPs).

The main tasks of the audit study will be:

- Consideration of the description of the project;
- Indicate the objective, scope and criteria of the audit;
- Study all relevant environmental law and regulatory frameworks on health and safety, sustainable use of natural resources and on acceptable national and international standards;
- Verify the level of compliance by the proponent with the conditions of the environmental management plan;
- Evaluate the implementing agencies' knowledge and awareness of and responsibility for the application of relevant legislation;
- Review existing project documentation related to all infrastructure facilities and designs;
- Examine monitoring programs, parameters and procedures in place for control and corrective actions in case of emergencies;
- Examine records of incidents and accidents and the likelihood of future occurrence of the incidents and accidents;
- Inspect all buildings, premises and yards in which manufacturing, testing and transportation takes place within and without the project area, as well as areas where goods are stored and disposed of and give a record of all significant environmental risks associated with such activities;
- Examine and seek views on health and safety issues from the project employees, the local and other potentially affected communities; and
- Prepare a list of health and environmental concerns of past and ongoing activities.

7.1 PROPOSED ESMF IMPLEMENTATION BUDGET

The breakdown of estimated costs for putting the ESMF in to operation is provided in Table 9. This includes the costs of providing the capacity building and training set out in Chapter 7. The total estimated costs for mainstreaming environment into the TRANSIP project is USD (1,229,375) consisting of:

a) USD 500,000 which will be included in the consultants procured to provide ESIA and RAP for TRANSIP subprojects. These consultants will be responsible for the work on preparation and implementation of ESIA, EMP, CRMP, RAP and ARAP objectives and activities.

b) USD 25,000 for the preparation of ESMF and RPF training materials;

c) USD 134,375for delivery of ESMF and RPF training as described in Section 7.2

d) USD 270,000 for remuneration of an Environmental and Social expert in PIU for the five years duration of the TRANSIP;

e) USD 100,000 for AAEPA to provide technical support and enhance its capacity for reviewing environmental screening, ESIA, RAP, ARAP report and other similar activities.

f) USD 200,000 AACRTB to undertake Environmental and Social Performance Audit

The above costs will be funded from TRANSIP Component A and B. The TRANSIP Environmental and Social Specialist will report on TRANSIP ESMF expenditure. This will provide for another way of monitoring on the extent that environmental and social issues are being addressed by the implementing agency.

Costs related to the required mitigation measures for TRANSIP subprojects are not set out in the budgets presented here. These will be assessed and internalized by implementing agency as part of the overall subproject cost. It is extremely difficult to estimate the proportion of project costs that can be expected to be devoted to mitigation measures. However, a rough rule of thumb is that it can be estimated to cost between 2% and 5% of the total project cost. Compensation and resettlement costs will be borne by the implementing agency and City Administration.

Table 9: Proposed Budget for Implementation of the TRANSIP ESMF

Activity	YR1	YR2	YR3	YR4	YR5	TOTAL	Notes
Technical Assistance support for preparation of ESMF & RPF Screening Reports, ESIAs, EMPs, CRMPs, RAPs	100,000	100,000	100,000	100,000	100,000	500,000	Assume lump sum USD 100,000 for preparation of 5 ESIA, 5 RAP per year (assuming that one document prepared by 10,00USD)
Training supplier develops ESMF & RPF training modules	25,000					25,000	Assume lump sum USD 25,000 for development of training modules
Training supplier delivers TRANSIP ESMF & RPF training	26,875	26,875	26,875	26,875	26,875	134,375	Assume 75 participants x USD 25 pd awareness raising courses + 50 participants x USD 35 pd in-depth courses
PIU Envi & Social Management experts	54,000	54,000	54,000	54,000	54,000	270,000	Assume USD 2250 (Birr 45,000 per month total including monthly wage, travel, DSA, computer, etc.)
Support for AAEPA to build capacity to carry out review of environmental screening, ESIA, RAP report and other similar activities.	20,000	20,000	20,000	20,000	20,000	100,000	Lump sum USD 20,000 allocated for AAEPA
AACRTB to undertake Environmental and Social Performance Audit	40,000	40,000	40,000	40,000	40,000	200,000	To undertake Environmental and social performance Audit
Total ESMF & RPF costs	277,750	252,750	252,750	252,750	252,750	1,229,375	

ANNEX A: ENVIRONMENTAL SCREENING FORM

TRANSIP subproject name:

Location (include map/sketch): *(e.g. region, district, etc)*

Type of activity : *(e.g. new construction, rehabilitation, periodic maintenance)*

Estimated Project Cost: (Birr)

Proposed Date of Works Commencement

Technical Drawing and Specifications Reviewed : (circle answer): Yes No

This report is to be kept short and concise.

1. Site Selection:

Physical data:	*Yes/No answers and bullet lists preferred except where descriptive detail is essential.*
Site area in ha	
Extension of or changes to existing alignment	
Any existing property to transfer to project	
Any plans for new construction	

Refer to project application for this information.

2. Impact identification and classification:

2.1 Site selection

When considering the location of a TRANSIP subproject, rate the sensitivity of the proposed site in the following table according to the given criteria. Higher ratings do not necessarily mean that a site is unsuitable. They do indicate a real risk of causing undesirable adverse

environmental and social effects, and that more substantial environmental and/or social planning may be required to adequately avoid, mitigate or manage potential effects. The following table should be used as a reference.

Issues	Site Sensitivity			Rating
	Low	Medium	High	
Natural habitats	No natural habitats present of any kind	No critical natural habitats; other natural habitats occur	Critical natural habitats present	
Water quality and water resource availability and use	Water flows exceed any existing demand; low intensity of water use; potential water use conflicts expected to be low; no potential water quality issues	Medium intensity of water use; multiple water users; water quality issues are important	Intensive water use; multiple water users; potential for conflicts is high; water quality issues are important	
Natural hazards vulnerability, floods, soil stability/ erosion	Flat terrain; no potential stability/erosion problems; no known volcanic/seismic/ flood risks	Medium slopes; some erosion potential; medium risks from volcanic/ seismic/ flood/ hurricanes	Mountainous terrain; steep slopes; unstable soils; high erosion potential; volcanic, seismic or flood risks	
Cultural property	No known or suspected cultural heritage sites	Suspected cultural heritage sites; known heritage sites in broader area of influence	Known heritage sites in project area	
Involuntary resettlement	Low population density; dispersed population; legal tenure is well-defined; well-defined water rights	Medium population density; mixed ownership and land tenure; well-defined water rights.	High population density; major towns and villages; low-income families and/or illegal ownership of land; communal properties; unclear water rights.	

3. Checklist of impacts identification and classification

Roads/ Pavements/road side furnitures (Construction and Maintenance) **Impacts during construction, operation and decommissioning phases**	**Potential for Adverse Impacts**				
	None	**Low**	**Med**	**High**	**Unknown**
Risk of causing disruption to basic utility services (Water supply, power, and telecom)?					
Wet season excavation?					
Significant vegetation removal?					
Cause air pollution? (Dust, e.t.c)					
Aesthetic disruption to the surrounding areas?					
Soil erosion or flooding concerns (e.g., due to highly erodible soils or steep gradients)					
Creation of quarry sites or borrow pits?					
Number of stream crossings or disturbances?					
Be located within or nearby environmentally sensitive areas (e.g. Parks, intact natural forests, wetlands, e.t.c)?					
Require that land (public or private) be acquired (temporarily or permanently) for its development?					
Use land that is currently occupied or regularly used for productive purposes (e.g. gardening, farming, pasture, fishing locations, forest)?					
Result in temporary or permanent loss of crops, fruit trees or household infrastructure such as granaries, outside toilets and kitchens?					
Displace individuals, families or businesses?					
Cultural or religious sites disturbed?					
Disturbance of economic activities leading to loss of income or property?					
Cause poor water drainage and increase the risk of water-related diseases such as malaria or bilharzias?					
Result in the production of solid or liquid waste, or result in an increase in waste production, during construction or operation?					
Wildlife habitats or populations disturbed?					
Environmentally sensitive areas disturbed?					
Other (specify):					

Road drainage works (Construction and Maintenance) **Impacts during construction, operation and decommissioning phases**	**Potential for Adverse Impacts**				
	None	**Low**	**Med**	**High**	**Unknown**
Risk of causing disruption to basic utility services (Water supply, power, and telecom)?					
Wet season excavation?					
Significant vegetation removal?					
Cause air pollution? (Dust, e.t.c)					
Aesthetic disruption to the surrounding areas?					
Soil erosion or flooding concerns (e.g., due to highly erodible soils or steep gradients)					
Creation of quarry sites or borrow pits?					
Number of stream crossings or disturbances?					
Affect the quantity or quality of surface waters (e.g. rivers, streams, wetlands), or groundwater (e.g. wells)?					
Be located within or nearby environmentally sensitive areas (e.g. Parks, intact natural forests, wetlands, e.t.c)?					
Require that land (public or private) be acquired (temporarily or permanently) for its development?					
Use land that is currently occupied or regularly used for productive purposes (e.g. gardening, farming, pasture, fishing locations, forest)?					
Result in temporary or permanent loss of crops, fruit trees or household infrastructure such as granaries, outside toilets and kitchens?					
Displace individuals, families or businesses?					
Cultural or religious sites disturbed?					
Disturbance of economic activities leading to loss of income or property?					
Increase the production of liquid wastes (e.g. sewage wastewater, and domestic or construction wastes)?					
Cause poor water drainage and increase the risk of water-related diseases such as malaria or bilharzias?					
Result in the production of solid or liquid waste, or result in an increase in waste production, during construction or operation?					
Wildlife habitats or populations disturbed?					
Environmentally sensitive areas disturbed?					
Other (specify):					

Pedestrian overpasses (bridges) **Impacts during construction, operation and decommissioning phases.**	**Potential for Adverse Impacts**				
	None	**Low**	**Med**	**High**	**Unknown**
Risk of causing disruption to basic utility services (Water supply, power, and telecom)?					
Wet season excavation?					
Significant vegetation removal?					
Cause air pollution? (Dust, e.t.c)					
Aesthetic disruption to the surrounding areas?					
Be located within or nearby environmentally sensitive areas (e.g. City parks, intact natural forests, wetlands, e.t.c)?					
Require that land (public or private) be acquired (temporarily or permanently) for its development?					
Use land that is currently occupied or regularly used for productive purposes (e.g. gardening, farming, pasture, fishing locations, forest)?					
Displace individuals, families or businesses?					
Result in temporary or permanent loss of perennial fruit trees or household infrastructure such as granaries, outside toilets and kitchens?					
Result in involuntary restriction of access by people to legally designate parks and protected areas?					
Disturbance of economic activities leading to loss of income or property?					
Cultural or religious sites disturbed?					
Cause poor water drainage and increase the risk of water-related diseases such as malaria or bilharzias?					
Affect the quantity or quality of surface waters (e.g. rivers, streams, wetlands), or groundwater (e.g. wells)?					
Risk of causing the contamination of drinking water?					
Wildlife habitats or populations disturbed?					
Environmentally sensitive areas disturbed?					
Create a risk of increasing soil salinity?					
Other (specify):					

Traffic light & Street light (Installation & maintenance) **Impacts during construction, operation and decommissioning phases.**	**Potential for Adverse Impacts**				
	None	**Low**	**Med**	**High**	**Unknown**
Generate environmentally undesirable heavy metal vapours upon disposal (e.g: Mercury vapour, Metal halides)?					
Cause light pollution?					
Wet season excavation?					
Significant vegetation removal?					
Cause air pollution? (Dust, e.t.c)					
Aesthetic disruption to the surrounding areas?					
Require that land (public or private) be acquired (temporarily or permanently) for its development?					
Use land that is currently occupied or regularly used for productive purposes (e.g. gardening, farming, pasture, fishing locations, forest)?					
Result in temporary or permanent loss of perennial fruit trees or household infrastructure such as granaries, outside toilets and kitchens?					
Displace individuals, families or businesses?					
Result in involuntary restriction of access by people to legally designate parks and protected areas?					
Disturbance of economic activities leading to loss of income or property?					
Cultural or religious sites disturbed?					
Cause poor water drainage and increase the risk of water-related diseases such as malaria or bilharzias?					
Affect the quantity or quality of surface waters (e.g. rivers, streams, wetlands), or groundwater (e.g. wells)?					
Wildlife habitats or populations disturbed?					
Environmentally sensitive areas disturbed?					
Other (specify):					

Vehicle maintenance workshop (Rehabilitation) **Impacts during construction, operation and decommissioning phases**	**Potential for Adverse Impacts**				
	None	**Low**	**Med**	**High**	**Unknown**
Cause the generation of used oil and lubricants?					
Cause the generation of noise and vibration?					
Cause fire hazard to neighbourhood?(e.g. fuel depot)					
Cause traffic congestion in the locality?					
Cause air pollution? (vehicle exhaust smoke and dust e.t.c)					
Wet season excavation?					
Significant vegetation removal?					
Soil erosion or flooding concerns (e.g., due to highly erodible soils or steep gradients)					
Affect the quantity or quality of surface waters (e.g. rivers, streams, wetlands), or groundwater (e.g. wells)?					
Be located within or nearby environmentally sensitive areas (e.g. Parks, intact natural forests, wetlands, e.t.c)?					
Require that land (public or private) be acquired (temporarily or permanently) for its development?					
Use land that is currently occupied or regularly used for productive purposes (e.g. gardening, farming, pasture, fishing locations, forest)?					
Result in temporary or permanent loss of perennial fruit trees or household infrastructure such as granaries, outside toilets and kitchens?					
Displace individuals, families or businesses?					
Cultural or religious sites disturbed?					
Disturbance of economic activities leading to loss of income or property?					
Increase the production of liquid wastes (e.g. sewage wastewater, and domestic or construction wastes)?					
Cause poor water drainage and increase the risk of water-related diseases such as malaria or bilharzias?					
Result in the production of solid or liquid waste, or result in an increase in waste production, during construction or operation?					
Environmentally sensitive areas disturbed?					
Other (specify):					

4. Detailed questions:

i. Preliminary Environmental Information: *Yes/No answers and bullet lists preferred except where descriptive detail is essential*	
State the source of information available at this stage (feasibility report or other environmental study).	

Refer to application and/or relevant environmental authority for this information.

ii. Identify type of activities and likely environmental impacts: *Yes/No answers and bullet lists preferred except where descriptive detail is essential*	
What are the likely environmental impacts, opportunities, risks and liabilities associated with the subproject	

Refer to ESMF– Impact, Mitigation and Monitoring Guidelines

iii. Mitigation of Potential Pollution: *Yes/No answers and bullet lists preferred except where descriptive detail is essential*	
Does the TRANSIP subproject have the potential to pollute the environment, or contravene any environmental laws and regulations?	
Will the subproject require pesticide use?	
If so, then the proposal must detail the methodology and equipment incorporated in the design to constrain pollution within the laws and regulations and to address pesticide use, storage and handling.	
Does the design adequately detail mitigating measures?	

Refer to ESMF– Impact, Mitigation and Monitoring Guidelines

iii. Determine environmental screening category: *Yes/No answers and bullet lists preferred except where descriptive detail is essential.*	
After compiling the above, determine which category the TRANSIP subproject falls under based on the environmental categories A, B and C.	

Refer to ESMF – Screening and Review Process

Categorization & Recommendations*

	Category	
	Category A	This types of subprojects will not be financed by TRANSIP as such and shall be subject to redesigning, re-routing e.t.c.
	Category B	Project may require an ESIA, or the inclusion of environmental and social mitigation and enhancement measures in the design and implementation of the project through the use of standard construction contract clauses and an environmental management plan
	Category C	Project is not subject to environmental assessment as no potential impacts are anticipated.

***Place tick in applicable box**

Reviewer:

Name:

Signature:

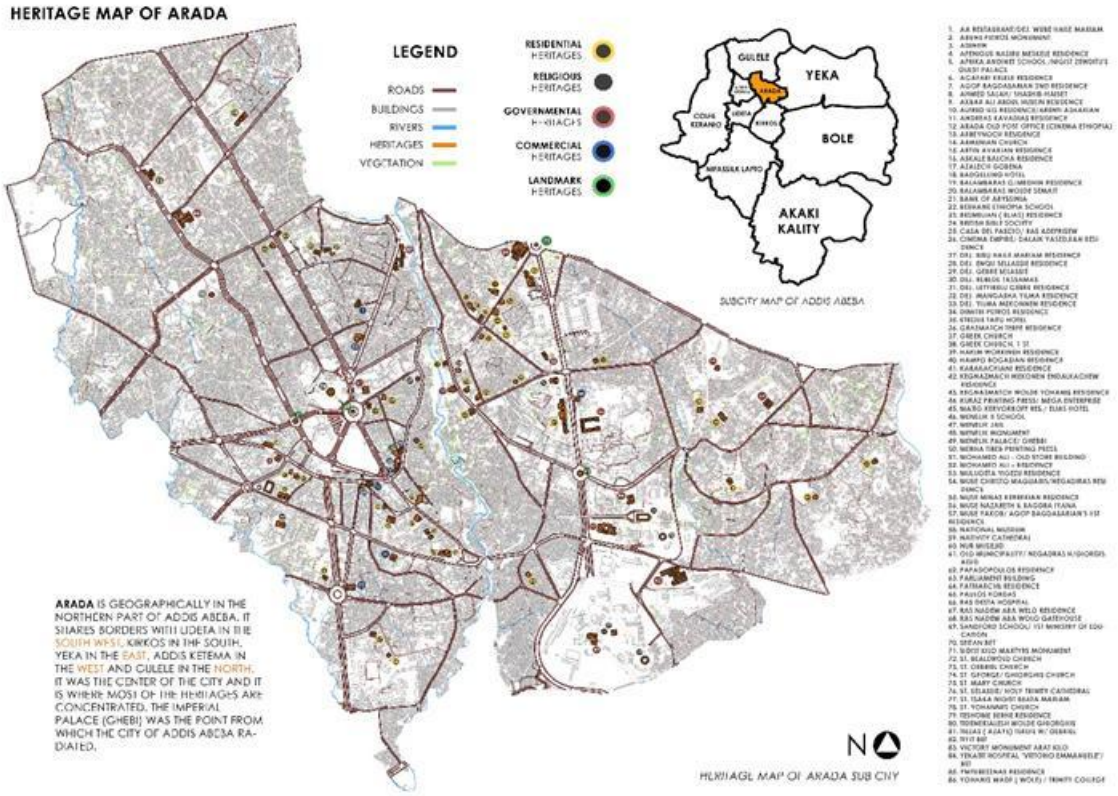
Date:

ANNEX B: LIST OF CULTURAL AND HISTORICAL HERITAGES FOUND ALONG EACH SELECTD ROAD CORRIDORS

1	***Heritage sites along the road corridor from Victory Monument – Arat Kilo – Piazza – Ras Mekonnen Bridge – Abune Petros square***
	- Ras Mulugeta Yigezu Residence - Birhan Ethiopia Educational Institution - Mega (Endrias Kabadias Residence) - Armenia Church - Greek Church - RasMekonnen Monument - RasMekonnen Bridge - BirhanAlem Kindergarten - BalambarasGebremedhin (TeshomeBerhe Residence) - NigusieKitffo Bet (PaulosKordac Residence) - Shoa Hotel - Cinema Empire - Cinema Ethiopia - Royal College - Old Post Office - Biadiglegn Hotel (Goodtime restaurant)
2	***Heritage sites along the corridor from St. George Church to Addis- Gebeya***
	- Papado Paulo - Small Semen Hotel - Mussie Chirstos Residence - Mussie Natheret Residence
3	***Heritage sites along the corridor from Atekilt Tera – Cathedral School – Central Statistics – Parliament – traffic Light***
	- First Municipality - First Abyssinia Bank (current Statistics Authority) - Africa Andnet School - Cathedral School - Cathedral Church - Benin Mosque - Ahimed Sala Residence - Kazedal Fashi (RasAdefris Residence) - Akber Ali Residence - ArtiNabakian Residence - Hakim Workneh Eshete Residence - Mohammed Ali Residence (besides post office) - Merah Tibeb Printing Press
4	***Heritages on the corridor from Bole Edna mall –Bole comprehensive school – Haya Hulet Mazoria – Golagool Building***

	- Dr. Addis Alemayehu Residence (near Golagool)
5	***Heritages on the corridor from Bole Brass Clinic- Urael – National Palace - Arat Kilo***
	Data Not available

Source: Addis Ababa Culture and Tourism Bureau, 2016.



HERITAGE MAP OF YEKA

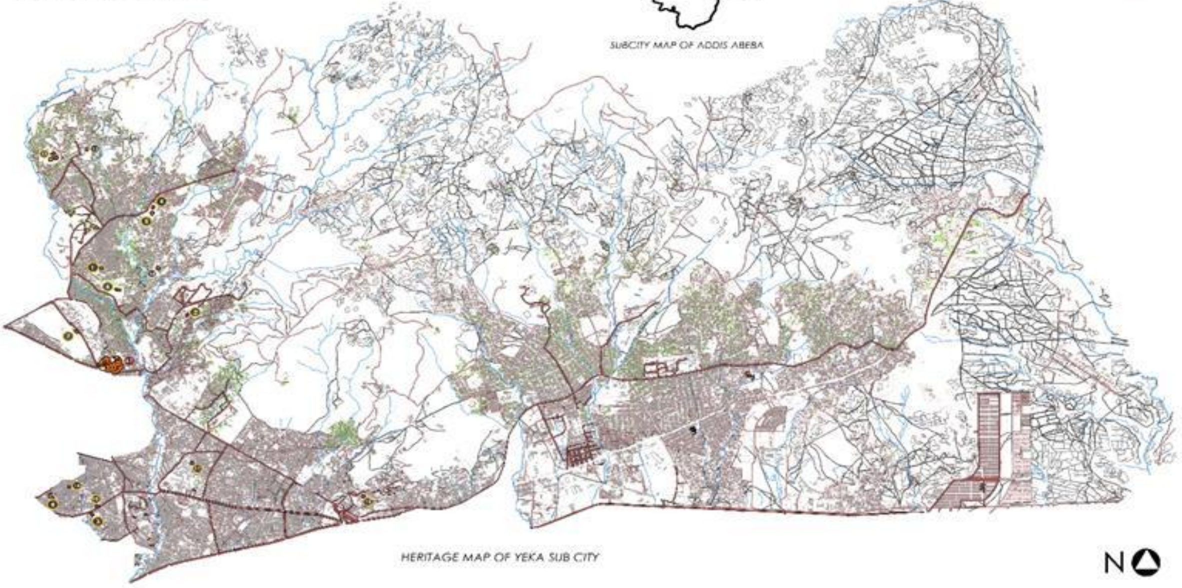
YEKA IS LOCATED IN THE NORTH EASTERN PART OF ADDIS ABEBA. IT SHARES BORDERS WITH GULELE IN THE NORTH WEST, ARADA IN THE WEST, KIRKOS IN THE SOUTH WEST AND BOLE IN THE SOUTH. IT MOSTLY COMPRISES RESIDENTIAL HERITAGES. THIS HERITAGES ARE CONCENTRATED ON THE WESTERN PART ALONG IT BORDER WITH ARADA, GULELE AND KIRKOS.

1. AFENIGUS TEKLIHUN HABTE RESIDENCE
2. ASHEK SEYUM 25
3. BITWEDED H/ MICHAEL RES./ KIDANEMIHRET
4. CUSTOMS OFFICE ESTEFANOS MENGASHA
5. CUSTOMS OFFICE RAS SEYOUM MENGESHA
6. DEJ. G/SELLASSE BARIYAGABIR RESIDENCE
7. JAN HOY MEDA/ DEJ. MEKURIA BANTYRGU
8. KAFAY WALE RESIDENCE
9. MENELIK II HOSPITAL
10. MENGASHA GENEMI RESIDENCE
11. RAS ABATE BAYALEW RESIDENCE
12. RAS KASA HAILU ESTATE
13. ST. GENETE YESUS CHURCH
14. ST. MICHAEL CHURCH YEKA
15. TOP VIEW REST./ DEJ. WENDIRAD DEBARACHE
16. WOLLMUHAMED RESIDENCE

SUBCITY MAP OF ADDIS ABEBA

LEGEND

ROADS		RESIDENTIAL HERITAGES	
BUILDINGS		RELIGIOUS HERITAGES	
RIVERS		GOVERNMENTAL HERITAGES	
HERITAGES		COMMERCIAL HERITAGES	
VEGETATION		LANDMARK HERITAGES	


HERITAGE MAP OF YEKA SUB CITY

N

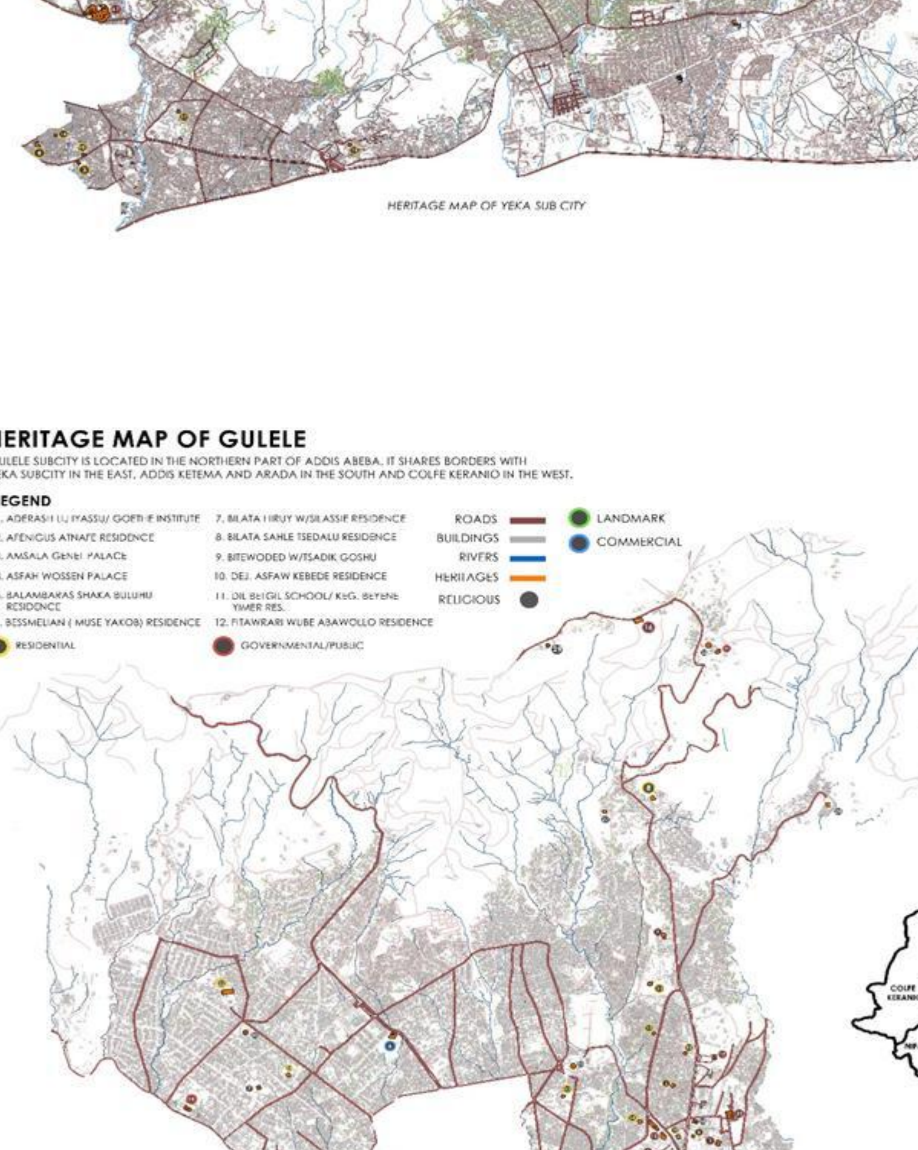
HERITAGE MAP OF GULELE

GULELE SUBCITY IS LOCATED IN THE NORTHERN PART OF ADDIS ABEBA. IT SHARES BORDERS WITH YEKA SUBCITY IN THE EAST, ADDIS KETEMA AND ARADA IN THE SOUTH AND COLFE KERANIO IN THE WEST.

LEGEND

1. ADERASH LIJ IYASSU/ GOETHE INSTITUTE
2. AFENIGUS ATNAFE RESIDENCE
3. AMSALA GENET PALACE
4. ASFAW WOSSEN PALACE
5. BALAMBARAS SHAKA BULUHU RESIDENCE
6. BESSMELIAN (MUSE YAKOB) RESIDENCE
7. BILATA HIRUY W/SILASSIE RESIDENCE
8. BILATA SAHLE TSEDALU RESIDENCE
9. BITEWODED W/TSADIK GOSHU
10. DEJ. ASFAW KEBEDE RESIDENCE
11. DIL BETGIL SCHOOL/ KEG. BEYENE YIMER RES.
12. FITAWRARI WUBE ABAWOLLO RESIDENCE
13. FITAWRARI WUBE ABAWOLLO RESIDENCE
14. GEBRE MARIAM GARI RESIDENCE
15. KARL MARX MONUMENT
16. KING MICHAEL BANQUET HALL
17. LIJ MEKONEN PALACE
18. MEDEHANE ALEM SCHOOL
19. MENELIK II ENTOTO PALACE
20. MUSE FASIKA RESIDENCE
21. RAS MEKONEN/ LIJ GENET PALACE
22. SHEIK OJELE HOUSE
23. ST. KECHENE MEDHANE ALEM CHURCH
24. ST. KIDANE MERIO CHURCH
25. ST. MARKOS CHURCH/ MENEBERE LEUL
26. ST. MARY CHURCH IN ENTOTO
27. ST. MENEBRE MENGIST KUSKUAM
28. ST. MEZKAYE HIZUNAN MEDHANE ALEM
29. ST. RACHEL CHURCH ENTOTO
30. ST. RUFAEL CHURCH
31. TAFARI MEKONNEN SCHOOL
32. TSEHAFI TIEZAS G/SILASIE NEGADIRAS
33. TSEHAFI TIEZAZ HAILE WOLDERUFE RESIDENCE

RESIDENTIAL · GOVERNMENTAL/PUBLIC · ROADS · BUILDINGS · RIVERS · HERITAGES · RELIGIOUS · LANDMARK · COMMERCIAL


N

HERITAGE MAP OF GULELE SUB CITY

SUB CITY MAP OF ADDIS ABEBA

ANNEX C: FORMAT OF AN ANNUAL ENVIRONMENTAL REPORT

Relevant environmental authority:							
Reporting dates:							
Name of City Administration:							
TRANSIP Subprojects approved:							
Subproject title	**Activities**	**Project phase[1]**	**Environmental. Category**	**ESIA / EMP completed?**	**Environmental license granted?**	**Effectiveness of EMP**	**Issues[2]**
(name, location, title or reference)	(new construction, rehabilitation, maintenance)	See note below	(A, B or C) or (1, 2, and 3)	Yes, No or N/A	Yes, No or N/A	Good, poor, or needs improvement	See note below
1							
2							
3							
etc							

[1] Subproject phase will be one of the following: (a) under project preparation or appraisal, (b) appraised, or (c) implementation

[2] Issues: accidents, litigation, complaints or fines are to be listed

ANNEX D: EXAMPLE OF ENVIRONMENTAL CONTRACT CLAUSES

CONSTRUCTION ACTIVITIES AND ENVIRONMENTAL RULES FOR CONTRACTORS

The following information is intended solely as broad guidance to be used in conjunction with local and national regulations. Based on this information, environmental rules for contractors should be developed for each project, taking into account the project size, site characteristics, and location (rural vs. urban).

After choosing an appropriate site and design, construction activities can proceed. As these construction activities could cause significant impacts on and nuisances to surrounding areas, careful planning of construction activities is critical. Therefore the following rules (including specific prohibitions and construction management measures) should be incorporated into all relevant bidding documents, contracts, and work orders.

PROHIBITIONS

The following activities are prohibited on or near the project site:

- ⇒ Cutting of trees for any reason outside the approved construction area;
- ⇒ Hunting, fishing, wildlife capture, or plant collection;
- ⇒ Use of unapproved toxic materials, including lead based paints, asbestos, etc.
- ⇒ Disturbance to anything with architectural or historical value;
- ⇒ Building of fires;
- ⇒ Use of firearms (except authorized security guards);
- ⇒ Use of alcohol by workers.

CONSTRUCTION MANAGEMENT MEASURES

Waste Management and Erosion:

Solid, sanitation, and, hazardous wastes must be properly controlled, through the implementation of the following measures:

Waste Management:

- ⇒ Minimize the production of waste that must be treated or eliminated.
- ⇒ Identify and classify the type of waste generated. If hazardous wastes (including health care wastes) are generated, proper procedures must be taken regarding their storage, collection, transportation and disposal.
- ⇒ Identify and demarcate disposal areas clearly indicating the specific materials that can be deposited in each.
- ⇒ Control placement of all construction waste (including earth cuts) to approved disposal sites (>300 m from rivers, streams, lakes, or wetlands).Dispose in authorized areas all of garbage, metals, used oils, and excess material generated during construction, incorporating recycling systems and the separation of materials.

Maintenance:

- ⇒ Identify and demarcate equipment maintenance areas (>15m from rivers, streams, lakes or wetlands).
- ⇒ Ensure that all equipment maintenance activities, including oil changes, are conducted within demarcated maintenance areas; never dispose spent oils on the ground, in water courses, drainage canals or in sewer systems.
- ⇒ Identify, demarcate and enforce the use of within site access routes to limit impact to site vegetation.
- ⇒ Install and maintain an adequate drainage system to prevent erosion on the site during and after construction.

Erosion Control

- ⇒ Erect erosion control barriers around perimeter of cuts, disposal pits, and roadways.
- ⇒ Spray water on dirt roads, cuts, fill material and stockpiled soil to reduce wind induced erosion, as needed.
- ⇒ Maintain vehicle speeds at or below 10mph within work area at all times.

Stockpiles and Borrow Pits

⇒ Identify and demarcate locations for stockpiles and borrow pits, ensuring that they are 15 meters away from critical areas such as steep slopes, erosion prone soils, and areas that drain directly into sensitive water bodies.

⇒ Limit extraction of material to approved and demarcated borrow pits.

Site Cleanup

⇒ Establish and enforce daily site cleanup procedures, including maintenance of adequate disposal facilities for construction debris.

SAFETY DURING CONSTRUCTION

The Contractor's responsibilities include the protection of every person and nearby property from construction accidents. The Contractor shall be responsible for complying with all national and local safety requirements and any other measures necessary to avoid accidents, including the following:

⇒ Carefully and clearly mark pedestrian-safe access routes.

⇒ If school children are in the vicinity, include traffic safety personnel to direct traffic during school hours.

⇒ Maintain supply of supplies for traffic signs (including paint, easel, sign material, etc.), road marking, and guard rails to maintain pedestrian safety during construction.

⇒ Conduct safety training for construction workers prior to beginning work.

⇒ Provide personal protective equipment and clothing (goggles, gloves, respirators, dust masks, hard hats, steel-toed and –shanked boots, etc.,) for construction workers and enforce their use.

⇒ Post Material Safety Data Sheets for each chemical present on the worksite.

⇒ Require that all workers read, or are read, all Material Safety Data Sheets. Clearly explain the risks to them and their partners, especially when pregnant or planning to start a family. Encourage workers to share the information with their physicians, when relevant.

- ⇒ Ensure that the removal of asbestos-containing materials or other toxic substances be performed and disposed of by specially trained workers.
- ⇒ During heavy rains or emergencies of any kind, suspend all work.
- ⇒ Brace electrical and mechanical equipment to withstand seismic events during the construction.

NUISANCE AND DUST CONTROL

To control nuisance and dust the Contractor should:

- ⇒ Maintain all construction-related traffic at or below 15 mph on streets within 200 m of the site.
- ⇒ Maintain all onsite vehicle speeds at or below 10 mph.
- ⇒ To the extent possible, maintain noise levels associated with all machinery and equipment at or below 90 db.
- ⇒ In sensitive areas (including residential neighbourhoods, hospitals, etc.) more strict measures may need to be implemented to prevent undesirable noise levels.
- ⇒ Minimize production of dust and particulate materials at all times, to avoid impacts on surrounding families and businesses, and especially to vulnerable people.
- ⇒ Phase removal of vegetation to prevent large areas from becoming exposed to wind.
- ⇒ Place dust screens around construction areas, paying particular attention to areas close to housing, commercial areas, and recreational areas.
- ⇒ Spray water as needed on dirt roads, cut areas and soil stockpiles or fill material.
- ⇒ Apply proper measures to minimize disruptions from vibration or noise coming from construction activities.

COMMUNITY RELATIONS

To enhance adequate community relations the Contractor should:

- ⇒ Following the country and EIA requirements, inform the population about construction and work schedules, interruption of services, traffic detour routes and provisional bus routes, as appropriate.

⇒ Limit construction activities at night. When necessary ensure that night work is carefully scheduled and the community is properly informed so they can take necessary measures.

⇒ At least five days in advance of any service interruption (including water, electricity, telephone, and bus routes) the community must be advised through postings at the project site, at bus stops, and in affected homes/businesses.

CHANCE FIND PROCEDURES FOR CULTURALLY SIGNIFICANT ARTEFACTS

The Contractor is responsible for familiarizing themselves with the following "Chance Finds Procedures", in case culturally valuable materials are uncovered during excavation, including:

⇒ Stop work immediately following the discovery of any materials with possible archaeological, historical, paleontological, or other cultural value, announce findings to project manager and notify relevant authorities;

⇒ Protect artefacts as well as possible using plastic covers, and implement measures to stabilize the area, if necessary, to properly protect artefacts

⇒ Prevent and penalize any unauthorized access to the artefacts

⇒ Restart construction works only upon the authorization of the relevant authorities.

ENVIRONMENTAL SUPERVISION DURING CONSTRUCTION

The bidding documents should indicate how compliance with environmental rules and design specifications would be supervised, along with the penalties for non-compliance by contractors or workers. Construction supervision requires oversight of compliance with the manual and environmental specifications by the contractor or his designated environmental supervisor. Contractors are also required to comply with national and municipal regulations governing the environment, public health and safety.

ANNEX E: ENVIRONMENTAL AND SOCIAL IMPACT MITIGATION AND MONITORING CHECKLISTS

Table 10: Roads/ Pavements/Road side furnitures/: Mitigation & Monitoring Checklist

Type of Activity	Potential Impacts	Generic Mitigation Measures	Monitoring Indicators	Responsibility
Construction	Negative social and economic effects on local people and communities, such as: • Unplanned commercial development • Demand for local public infrastructure and services increases beyond existing capacities • Disruption of traditional lifestyles • Induced population movements and natural resource exploitation activities, due to improved access.	• Work with affected communities to anticipate and plan for enhanced access to and demand on local public infrastructure and services. • Provide project funds to strengthen local public infrastructure and. • Avoid creating congested and unsafe road conditions at intersections, and in villages and towns.	Participation of communities in local planning	PIU
	Displacement of housing or involuntary resettlement	• Allocation of replacement land and resettlement of affected people • Monetary compensation	Number of project affected people adequately compensated and resettled	AA City Administration/AACRTB/ Land Use Administration
	Loss of vegetation, important habitats, biodiversity	Avoid infringing on: • Critical habitats or areas with significant biodiversity (e.g. wetlands) • Protected natural sites and street maidens and sides with vegetation cover (e.g: Road side trees)	• Degree of biodiversity (number of species) in road vicinities • Extent of critical habitats	AACRTB/PIU / Bureau of Agriculture
	Damage valuable historic, religious, cultural, and archaeological resources	Avoid areas of cultural, historical, or religious significance. Apply chance find procedures in construction clauses.	Participation of communities in local planning.	AACRTB/PIU/ Land Use Administration
	Social disruption during construction (e.g. enhanced transmission of STDs and TB)	• Comprehensive community participation in construction planning and management • Education on avoiding communicable diseases/hygiene	Occurrence of illness or disease	AACRTB/PIU/ / Bureau of Health

		• Use regional labour where possible		
	Creation of stagnant water in road sides/drainage construction, borrow pits and quarries that breed disease carriers	Assess ecology of disease carriers in road corridor, and employ suitable mitigation measures (e.g. proper drainage of construction areas and road sides, effective road maintenance)	• Occurrence of illness or disease • Drive roads after moderate rains to identify areas that collect or gully water	AACRTB/PIU/Contractor
	Impact of road accidents and noise on surrounding habitation	Put traffic safety signals on appropriate places during construction to prevent unintended traffic accidents on pedestrians and vehicles. Plant tree buffer strips between road and surrounding habitation and social service facilities such as schools & hospitals	Number of community complaints to local authorities about noise	AACRTB/PIU/Contractor
	Contaminate surface water and generate trash due to lack of solid waste management	• Collect all solid waste from all site areas and dispose of either in local landfill or well-screened waste pits	Local complaints of excessive waste and odours	AACRTB/PIU/Contractor
	Increased soil erosion leading to sediment in runoff and, possibly, gully formation from: • Construction activities such as grading, excavations, and borrowing/quarrying • Inadequate design of culverts and drainage controls.	Design: • Use surface drainage controls and mulch on vulnerable surfaces and slopes • Line receiving surfaces with stones or concrete • Locate and design borrow/quarry sites for erosion control during road construction and future maintenance operations • Identify the most environmentally sound source of materials within budget Construction: • Limit earth movement and soil exposure to the dry season • Balance cut and fill for minimum deposition of earth • Provide sedimentation basins • Resurface and re-vegetate exposed surfaces	• Quality of soil/productivity • Integrity of road structures • Accidents due to erosion of road	AACRTB/PIU/Contractor
Post-	Landslides, slumps and slips	• Avoid areas of soil, slope or geological instability	• Quality of road	AACRTB/PIU/Contr

Construction and Operation		and unstable river crossing sites • Stabilize slopes by planting vegetation • Minimize vertical road cuts • Install drainage ditches to divert water away from road	• Degree of erosion	actor
	Accidents and safety risks	Construct basic speed bumps and employ traffic signs where possible	• Number of accidents reported per month to local government	AACRTB/PIU/Contractor
	Increased soil erosion leading to sediment in runoff and, possibly, gully formation from inadequate maintenance of road surface, ditches, borrow/quarry sites, and drainage and erosion control measures	• Ensure proper and timely maintenance of erosion control and drainage measures along the road and at borrow/quarry sites. • Clean out culverts and side channels/run out when they begin to fill with sediment. • Fill mud holes and pot holes with quality gravel. • Use water from settling basins and retention ponds for road maintenance.	• Quality of soil/productivity • Integrity of road structures • Accidents due to erosion of road • Collection of water in drainage system	AACRTB/PIU/Contractor
	Quarry used for construction may become a health hazard	• Discuss with local community the usefulness of using pits as water collection pits for cattle, irrigation • High light issues of disease transmission and the need to prohibit its use for drinking, bathing, and clothes washing	Occurrence of disease or illness	AACRTB/PIU/Contractor
	Dust due to traffic	• Implement agreed dust control measures such as wetting dirt roads, truck washing for trucks exiting site, and monitoring dust emissions	Number of community complaints to local authorities about dust	AACRTB/PIU/Contractor

Table 11: Drainages/Traffic Control Buildings: Mitigation & Monitoring Checklist

Potential Impacts	Generic Mitigation Measures	Monitoring Indicators	Responsibility
Illness or disease from contaminants entering water supply system caused by damages to water mains during construccction	• Ensure planning, design, and maintenance of supply, sanitation, and wastewater works is appropriate to local needs, and to soil and water table conditions) • Ensure that water is fit for drinking (make regular testing a part of the project if possible	• Occurrence of illness or disease • Regular testing (if possible) • Involve community in local planning process	AACRTB/PIU/Contractor/AAWSA
Contaminated soils and water tables from disposal of inadequately decomposed wastewaters caused by damages to sewer lines during construction.	Ensure maintenance of sanitation and wastewater works is appropriate to local needs, and to soil and water table conditions	Involve community in local planning process	AACRTB/PIU/Contractor/AAWSA
Groundwater contamination	• Ensure adequate design, installation, and maintenance of latrines, holding tanks, septic systems and wastewater soak-aways	• Occurrence of illness or disease • Decrease in production due to water contamination (e.g. stunted growth, no growth)	AACRTB/PIU/Contractor/AAWSA
Surface water contamination	• Disconnect illegal sewage pipes that are found pumping sewage from neighbourhood sources to drainage channels that drain into surface waters. • Locate latrines, septic systems and soak-aways at least 30 meters from any waterbody (e.g. stream, lake, river)	• Occurrence of illness or disease • Decrease in production due to water contamination (e.g. stunted growth, no growth)	AACRTB/PIU/Contractor/AAWSA
Disruption or destruction of sites of cultural, religious or historical importance	Involve community in locating appropriate project sites and access routes that avoid such resources	Survey of local population regarding problems with culturally sensitive areas	AACRTB/PIU

ANNEX F: GUIDELINE FOR ENVIRONMENTAL MANAGEMENT PLAN

When a subproject includes distinct mitigation measures (physical works or management activities), an Environmental Management Plan (EMP) needs to be included with the subproject application. An EMP usually includes the following components:

- **Description of adverse effects**: he anticipated effects are identified and summarized.
- **Description of mitigation measures:** Each measure is described with reference to the effect(s) it is intended to deal with. As needed, detailed plans, designs, equipment descriptions, and operating procedures are described.
- **Description of monitoring program:** Monitoring provides information on the occurrence of environmental effects. It helps identify how well mitigation measures are working, and where better mitigation may be needed. The monitoring program should identify what information will be collected, how, where and how often. It should also indicate at what level of effect there will be a need for further mitigation. How environmental effects are monitored is discussed below.
- **Responsibilities:** The people, groups, or organizations that will carry out the mitigation and monitoring activities are defined, as well as to whom they report and are responsible. There may be a need to train people to carry out these responsibilities, and to provide them with equipment and supplies.
- **Implementation schedule:** The timing, frequency and duration of mitigation measures and monitoring are specified in an implementation schedule, and linked to the overall subproject schedule.
- **Cost estimates and sources of funds:** These are specified for the initial subproject investment and for the mitigation and monitoring activities as a subproject is implemented. Funds to implement the EMP may come from the subproject grant, from the community, or both. Government agencies and NGOs may be able to assist with monitoring.
- **Monitoring Methods:** Methods for monitoring the implementation of mitigation measures or environmental effects should be as simple as possible, consistent with collecting useful information, so that community members can apply them themselves (see example below). For example, they could just be regular observations of subproject activities or sites during construction and then use. Are fences and gates

being maintained and properly used around a new water point; does a stream look muddier than it should and, if so, where is the mud coming from and why; are pesticides being properly stored and used? Most observations of inappropriate behavior or adverse effects should lead to commonsense solutions. In some cases (e.g. unexplainable increases in illness or declines in fish numbers), there may be a need to require investigation by a technically qualified person.

Table 12: ESMP preparation template form

Potential environmental & social impacts	Proposed mitigation measures	Responsible for implementing the mitigation measures	Responsible for monitoring the implementation of mitigation measures	Time Horizon		Cost Estimate	
				Mitigation	Monitoring	Mitigation	Monitoring

ANNEX G: SUMMARIZED REPORT OF CONSULTATIONS

Transport Systems Improvement Project

Consultation Report for ESMF Preparation

1. INTRODUCTION

As part of the ESMF and RPF preparation processes for the Component A & B of the TRANSIP a stakeholder and community consultations were carried out in two separate venues. Participants invited for the stakeholder consultation meeting were mainly public and private organizations that were selected based on their expected roles, concerns, and influences by and on the proposed project. The half day stakeholder consultation meeting was held at the Aphrodite hotel on 18 December 2015 and it was led jointly by the ESMF and RPF consultants and members of the PIU of the TRANSIP project. In order to initiate the participation of the stakeholders and community members a presentation was made that cover the project objectives, components and the main elements of the draft TRANSIP ESMF procedures.

In a similar way, a half day community consultation meeting was held in Kaleb Hotel on 24 December 2015. Invited participants for the community consultations include representatives of community leaders/elders, vulnerable and disadvantaged groups, residents and business owners from the selected road corridors, as well as community organization (Edir) representatives.

The main purpose of the stakeholder and community consultations was to inform & create awareness about the TRANSIP project by providing project information and to encourage their participation by providing the venue to reflect their views, opinions and concerns on the ESMF development. The consultation meetings were also aimed at enabling the stakeholder and community representatives to identify the environmental impacts and issues that concerns them most in relation to the TRANSIP project and to involve them in developing appropriate mitigation actions by applying their indigenous/local knowledge of the project implementation areas. Interviews were also conducted with selected stakeholders to identify institutional capacity gaps and other constraints to implement the ESMF procedures. The stakeholder and community consultation meetings were attended by more than 50 participants.

2. KEY FINDINGS OF THE CONSULTATION MEETINGS

2.1 INSTITUTIONAL CAPACITY GAPS

The following observations were made regarding the existing capacities in the institutions during the consultations carried out with the stakeholders and local community representatives:

a. The TRANSIP implementing agencies such as AACRTB, AACRA, Anbessa City Bus Service Enterprise, and others found at the City Administration level appears to be new for the ESMF/RPF process and have neither the experience nor the capacity to become conversant and to facilitate implementation of the associated procedures outlined in the ESMF and RPF. The same appears to be true with the Federal Transport Authority which is the implementing agency mainly for component C of the TRANSIP project. However, the Project Implementation Unit (PIU) of AACRTB have employed environmental and social safeguard specialists who are experienced in applying similar ESMF and RPF procedures in other World Bank funded projects.

b. The Addis Ababa City Environmental Protection Authority (AAEPA) appears to have the institutional standing necessary to play its role as regulatory body. The AAEPA have ratified the regional version of the basic national environmental laws such as the Environmental Impact Assessment (Reg. No. 21/2006) and Pollution Control regulation (Reg.No.25/2007) and have a department responsible for environmental impact assessment reviews. The EIA department is currently staffed with four experienced experts, though its organizational structure allows up to seven staff.

   The AAEPA has developed a certain level of experience in applying the EIA laws on project proponents, in conducting EIA and associated EMP reviews, as well as carrying out compliance monitoring of projects. The Authority has also been exposed to ESMF and RPF procedures and played its role as regulatory body during the implementations of ULGDP I project and the ongoing Bole Lemi and Kilinto Industrial Zone development projects.

   However, despite its efforts to discharge its responsibilities as regulatory body, it was expressed during the stakeholder consultation that the Authority has serious

gaps in capacity that constrain it to conduct environmental monitoring and inspection which is necessary to follow up the compliance of projects with its EMPs. The capacity gaps include lack of training, lack of equipment for monitoring air quality, noise and e.t.c. It also involves lack of transport and related logistical resources to discharge its regulatory responsibilities in full.

2.2 GENERAL ISSUES ,VIEWS AND CONCERNS EXPRESSED IN THE DISCUSSIONS

During the consultation meetings discussions were held and several issues, questions, concerns and opinions were expressed by the participants. A summary of the issues and concerns raised during both stakeholder and community consultation meetings are presented as follows.

During introductory speeches, many participants underlined on the significance of carrying out such consultations prior to the commencement of big projects such as the TRANSIP, which they believed is essential for the successful and coordinated implementation of it. The participants recounted their past experiences of negative consequences arising from absence of early consultations on big projects that took place in Addis Ababa city. A participant from the local woreda authorities gave an example by describing that his local administration office was recently engulfed by project affected persons who were displaced by a city road project that didn't inform or made early arrangements neither with the PAPs themselves nor with the local administration.

Concerns were expressed during the stakeholder consultations that certain vital sectors that have direct legal responsibility for greening and cleaning the streets of Addis Ababa City are not seen onboard the TRANSIP project. Such important stakeholder institutions include the Addis Ababa beautification and parks development office which is responsible for cultivating street gardens and trees, and Addis Ababa waste recycling and disposal office responsible for collection and disposal of municipal waste including street wastes. The concerns were expressed that these institutions need to be involved and supported to build their capacity in order to effectively discharge its responsibility during implementation of the project. Other participants also requested on the involvement of regulatory institutions such as REPA on the steering committee of the TRANSIP project components run by AACRTB.

During stakeholder and community consultation meetings, participants were particularly curios on the impacts of proposed road improvement works to be done on the Atkilt Tera road segment. It was stated during the discussion that the Atkilt Tera road hosts numerous trades and businesses ranging from the high ranking whole-sale traders to the lower daily income earning businesses and the road improvement activities may have the potential to disrupt most of those business activities. Moreover, other participants stated that the prevalence of informal street vendors in Arada sub city is quite high. Thus it is important the project considers various options to address the social impacts on these groups.

Another area of concern for the stakeholder and community consultation participants were the resettlement impacts of the TRANSIP sub-projects. The participants mainly focused on the difficult situations many affected households may find themselves when they are not able to provide evidences of title deeds for the properties they live in for various reasons. The participants stressed that when some City administration funded projects were implemented; many households who have been residing in a kebele house for more than 30 years were displaced without making concrete arrangements for resettlement in the recent past and they have been pushed to live in dire situations. The participants also expressed their concerns on certain government guidelines which allow for immediate termination of tenancy agreement of public/government/ owned business shops and the subsequent immediate evacuation without any arrangement for resettlement, when the site is needed for development and should be demolished. Such guidelines strip the business owners from any rights for resettlement.

Other participants were also concerned on the considerations of the TRANSIP subprojects to design and build the road pavements, pedestrian overpasses, and bus stops in a manner that will also be suitable for the disabled and the elderly. A representative of the disabled association stated that, the elderly and disabled persons are the most affected people by shortage of suitable street crossing points in the city and sometimes they have to walk long distances to find one. Thus it was stressed that the project pays enough attention on this aspect during design and construction of the subprojects.

The issue of applying the city master plan as a bench mark to plan all the pavement and road expansion works to be done by the TRANSIP project was also discussed by the participants. It was stated that the current master plan of the city has provided a response to the problems of pedestrian walkways and hence should be taken as a guiding document for planning the

works of the TRANSIP project. Another participant from the road designing department of AACRA affirmed that all designs to be worked for the TRANSIP or other projects will strictly adhere to the allowed dimensions of roads and pavements in the master plan.

Representatives of the local authorities (Woreda Administrations) were especially concerned about the coordination mechanisms of the TRANSIP project implementation. In this regard the role of Woreda administrations in facilitating the resettlement of PAPs from right of way is very crucial. Thus it was reflected that the implementation arrangements will need to devise mechanisms to get connected and coordinated with the local authorities.

Various reflections were also made in relation to the selected five road corridors for improvement. A participant from the academia reflected on the objectivity of the criteria applied for selection of the proposed five road corridors and wondered if that will enable to fulfill the envisioned goals of the project. He queried if it was possible to base the selection process through identifying the traffic black spots of the City by undertaking a general road safety audit on the city road network first and then continue the selection of the specific roads for improvement based on the findings of the audit. Other participants expressed their views by stating that instead of starting the project by selecting roads in the urban core area, it would have been better to start working on the peripheral roads and to expand inwards. These opinions were further reinforced by the fact that many of the roads selected for improvement may incur high costs in trying to relocate the utility lines such as water supply mains, sewerage, telecom and electricity lines which will be present within the right of way of the roads and pavements. Another participant noted that with the expansion of pavements, the width of Arat-kilo piazza road (which is a segment of one of the five road corridors selected) will become narrow and may create another unexpected type of traffic congestion. Thus it was suggested to designate that road segment as one way road to avoid future unexpected traffic congestions. The same participant also aired his concern on the relation of the present tax system for importing new cars vis–a-vis the large number fleet of old cars cruising in the city and causing air pollution.

Finally, it was explained to the participants that the purpose of preparing the ESMF and RPF framework guidelines is to streamline applicable national laws and regulations on environment, resettlement and compensation with the World Bank safeguard policies to ensure that all projected social and environmental impacts are assessed and properly mitigated prior to the commencement of subproject implementations. The ESMF and RPF

guidelines being drafted will allow early consultations and agreements to be made with project affected persons. Explanation were also given by the PIU members on the process of selection of road corridors for improvement.

List of contacted people

No.	Name	Institution	Responsibility	Telephone
1	Ato Saed Abdela	Addis Ababa Environment Protection Authority	Head of Environmental Impact Assessment Version	0911 375721
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3	W/ro Hiwot Abraha	Addis Ababa Environment Protection Authority	Natural Resource Development, Utilization and Control Core process	0966 922973
4	Ato Getachew Belachew	Addis Ababa Environment Protection Authority	Acting coordinator of EIA version	
5	W/ro Banchialem Adissu	Federal Transport Authority	TRANSIP Project PIU Coordinator	0911 152697
6	W/ro Eyerusalem Tesfaye	Federal Transport Authority	TRANSIP Project PIU member	0911 612417
7	W/ro Roman Kassahun	Ministry of Environment, Forest and Climate change	Head of EIA Directorate	
8	Ato Yohanes	Ministry of Environment, Forest and Climate change	EIA Officer	

The over 50 Participants of the meetings held in the Addis Ababa are listed in the attendance lists attached with the minutes of consultation for each city.

PHOTO LOG

Plate 1: Partial view of Omer Semeter- Cathedral School -CSA- National Palace

Plate 2: Partial view of Arat Kilo - Ras Mekonnen, Degol -Abune Petros -Atekilt tera

Plate 3: Partial view of St Giorgis - Gojam Ber Road

Plate 4: Partial view of Arat Kilo - National Palace- Urael- Bole Brass Clinic

Plate 5: Partial view of Africa Street- Edna mall-Golagul-Denberewa- British Embassy

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ቀን 24/04/2008

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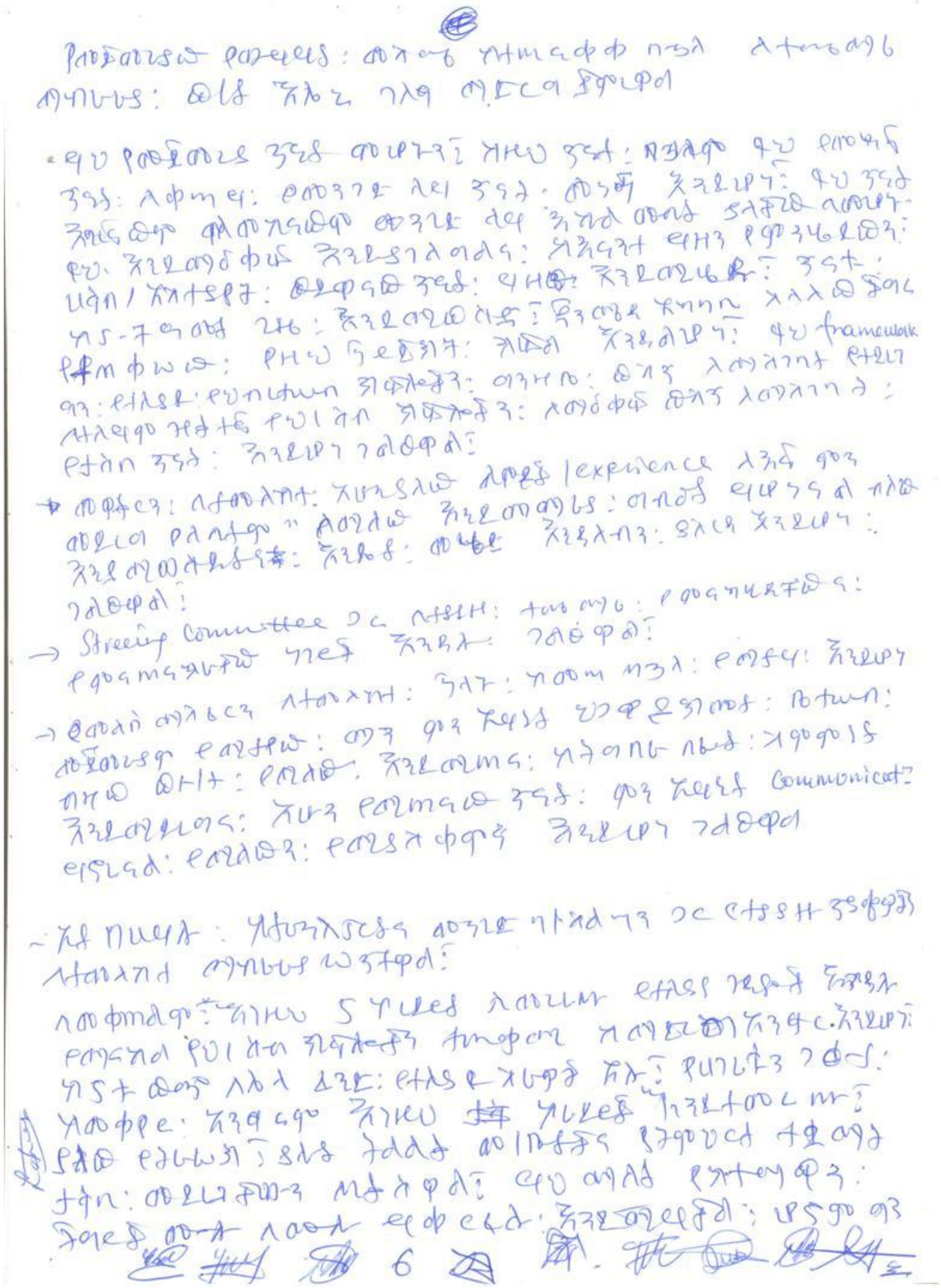

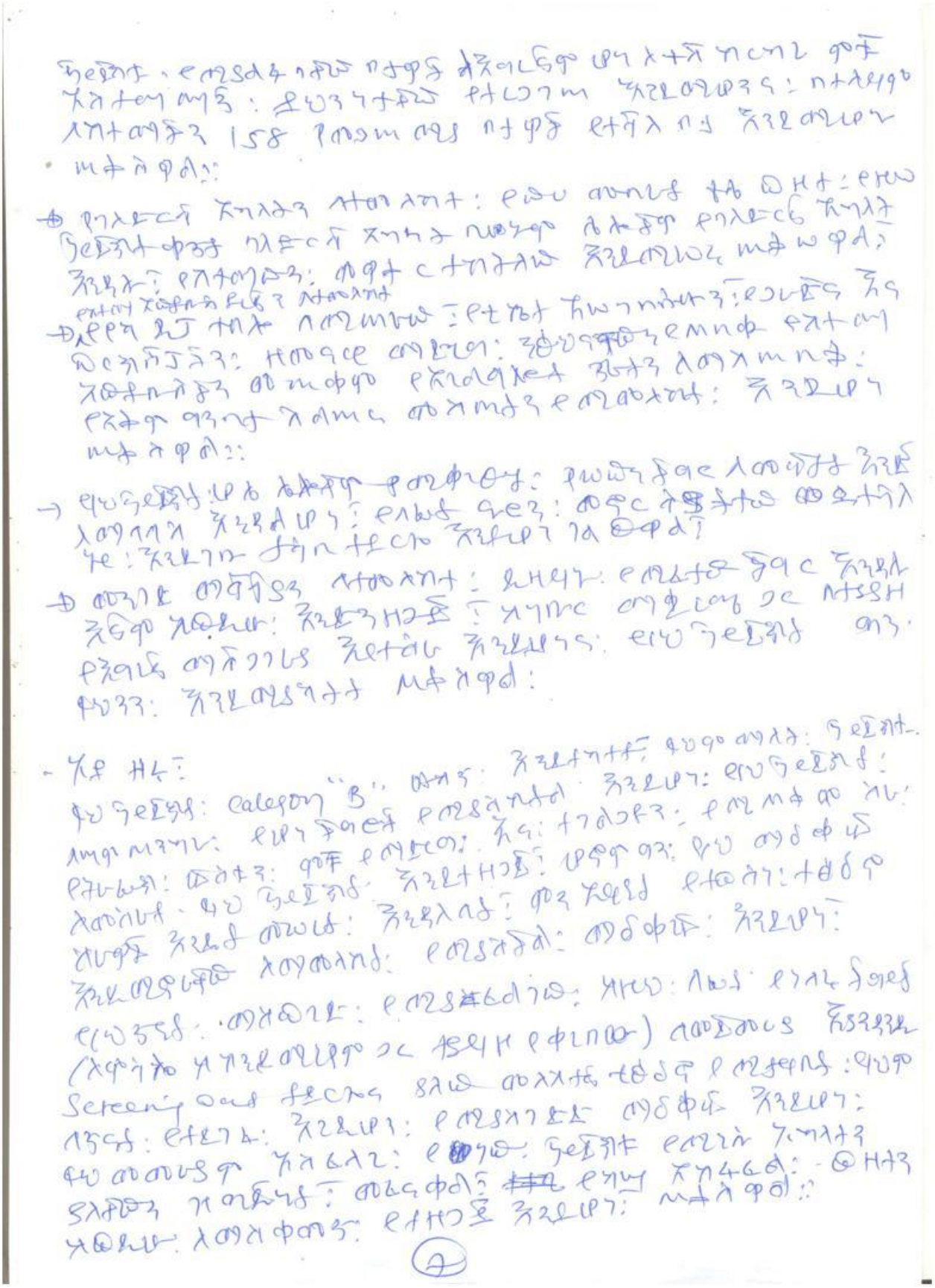

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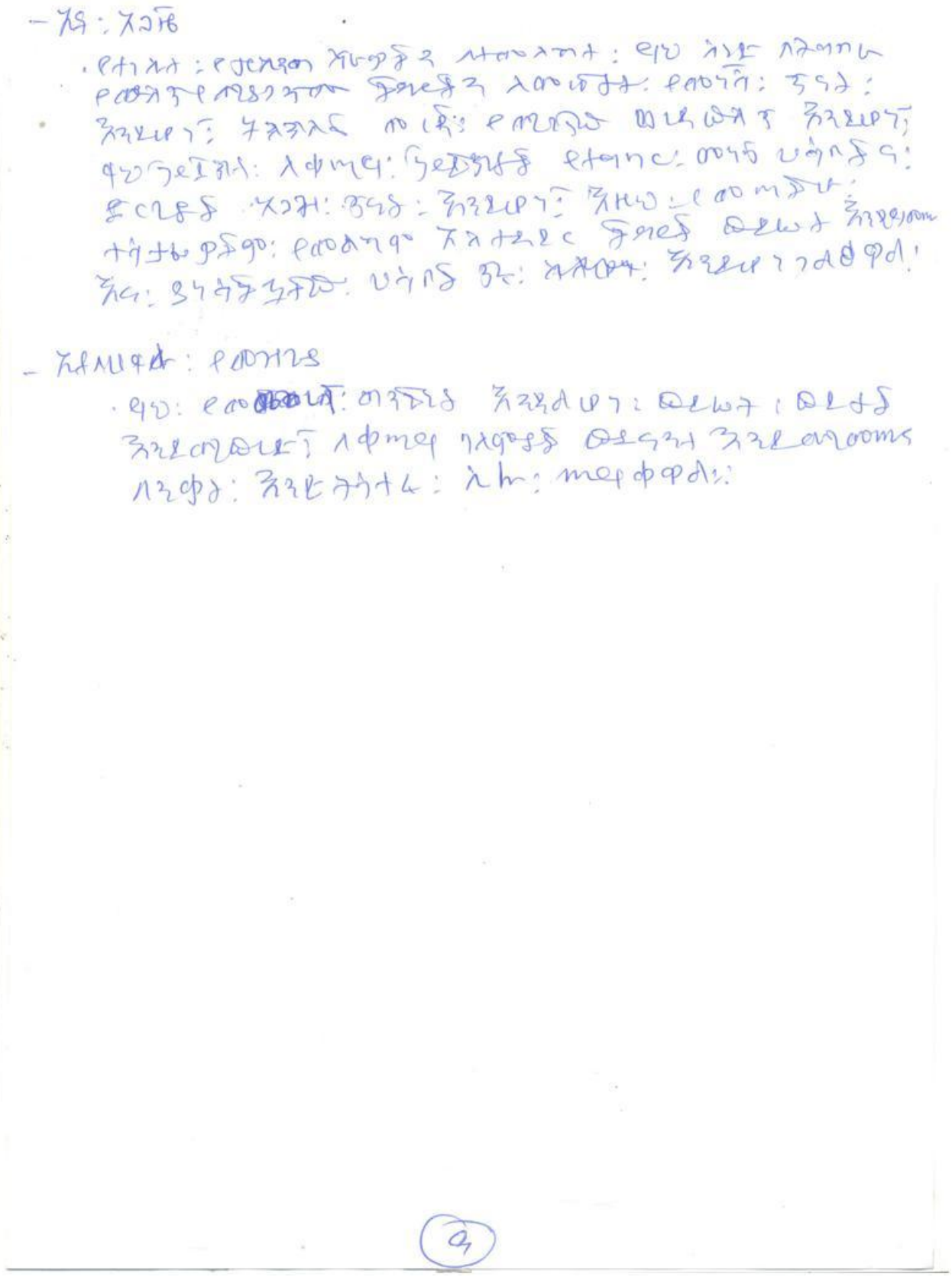

Addis Ababa Urban Transport and Land Use Support Project (AAUTLUSP)

Environmental and Social Management Frame Work Preparation Stakeholders Consultation meeting

Participants Registration sheet

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13	Tsehaye Gebretsion	Arada Environmental pro..	0912424973	
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15	Solomon Kidane	TPMO	0922853005	
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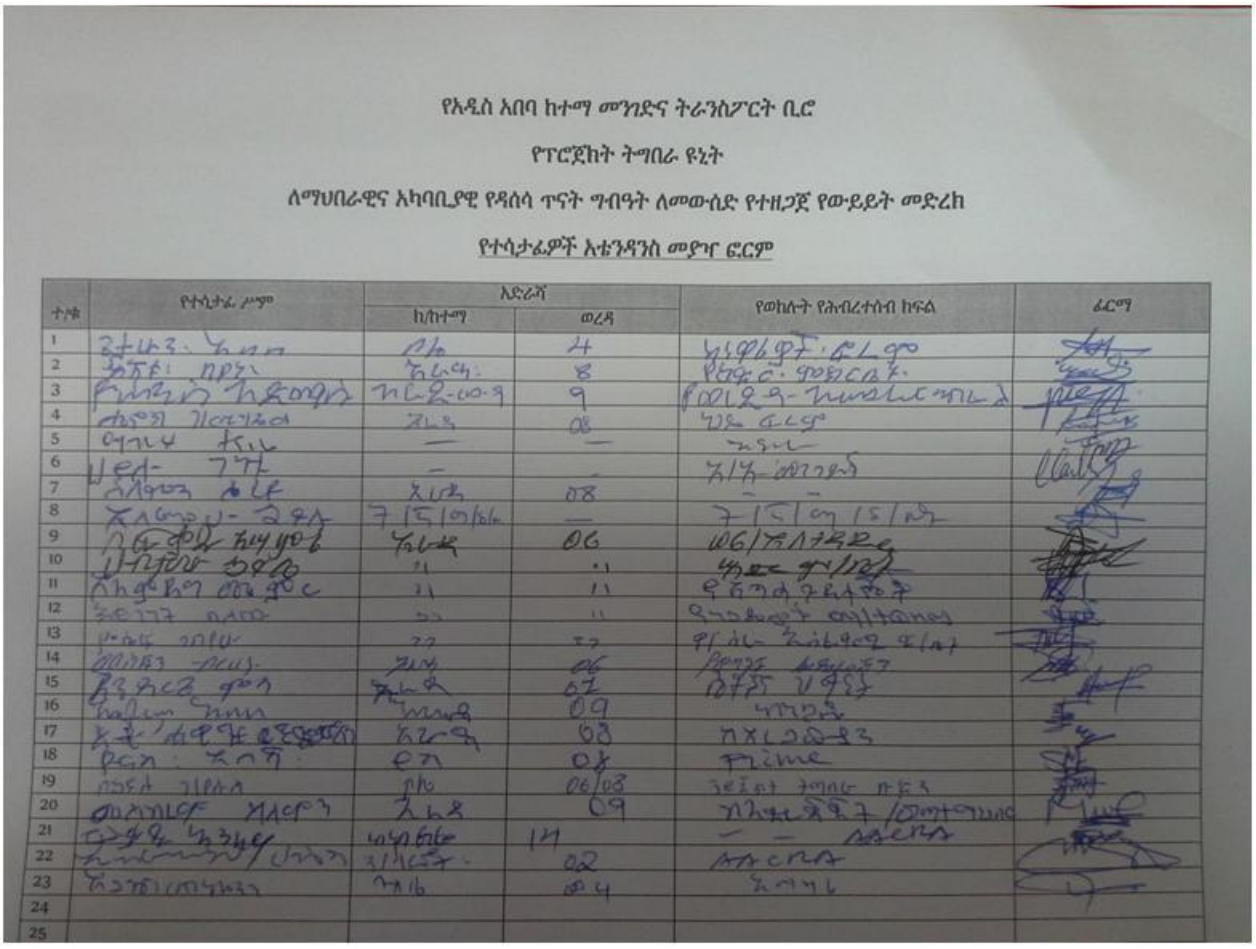
22	Yonas Abeshu	RPF & SIA	0911648744	
23	Gizaw Alebe	Ethiotelecom	0911231309	
24	Tad menben	Ethiotelecom	0911284338	



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