



**AFRICAN DEVELOPMENT
BANK GROUP**

**PROJECT: NAIROBI OUTER-RING ROAD IMPROVEMENT
PROJECT**

COUNTRY: KENYA

ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT SUMMARY

Date: June 2013

Preparation Team

Team Leader:	G. Makajuma, Infrastructure Specialist, EARC
Team Members:	Z. Tessema, Transport Engineer, OITC.2 J. Katala, Transport Engineer, OITC.2 N. Kulemeka, Socio-Economist, ONEC.3 E. Ndinya, Environmental Specialist, ONEC.3 D. Gebremedhin, Transport Economist, OITC.1 P. Owuori, Procurement Officer, EARC D. Mutuku, Financial Management Specialist, EARC
Sector Director:	A. Oumarou, (OIC) OITC.2
Regional Directors:	G. Negatu, EARC
Sector Manager:	A. Oumarou, OITC.2

ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT (ESIA)

SUMMARY

Project Name : **Nairobi Outer Ring Road Improvement Project**
Country : **Kenya**
Project Number : **P-KE-DB0-020**

1. Introduction

The Government of Kenya through the Kenya Urban Roads Authority (KURA) intends to upgrade the Outer-Ring Road from its current condition that has a deteriorated bitumen surface. The road is to be upgraded to enhance smooth traffic flow and improve traffic movement linkages with major corridors such as Nairobi – Thika Highway, the Eastern Bypass and Nairobi – Mombasa Highway. The road corridor is highly built-up with residential, medium to high commercial features and low level industrial activities.

The proposed project road is an important road connecting Thika Rd (A2) and Mombasa Rd (A109) trunk roads. The road starts at the junction of GSU along Thika road and ends at the Eastern bypass road. The road traverses through an intense development of industrial establishments from GSU to Mathare River Crossing, at Jogoo Road and Outering Junction up to Ngong River and after Tassia Estate. Commercial Centers such as banks, retails outlets, fuel stations, market centers and residential estates are prominent along this road mostly high density i.e. Huruma, Kariobangi, Dandora, Umoja and Donholm estates.

The total length of the project road is approximately 13Km, comprising of 2 lane carriageway. It carries heavy traffic and the Level of Service (LOS) is low with journey speed in the range of 12 to 15kmph. Most of the Mombasa port bound freight traffic from Thika Road uses this road from industrial establishments in the area. The proposed project intervention will lead to loss of productive assets (business premises, credit, etc.) for certain socio-economic groups in particular for women, some poor and vulnerable groups along the project corridor.

According to the Bank’s Initial Environmental and Social Screening Checklist, the Project is classified as Category 1. This ESIA Summary has therefore been prepared in accordance with AfDB’s Environmental and Social Assessment Procedures (ESAP). A Category 1 project calls for a full ESIA (Environmental and Social Impact Assessment) to be carried out. In addition, over 200 persons will be involuntarily displaced. Since the ESIA is based on a detailed engineering, a full Resettlement Action Plan (RAP) has been prepared and is included as an Annex 1.

2. Project Description and Justification

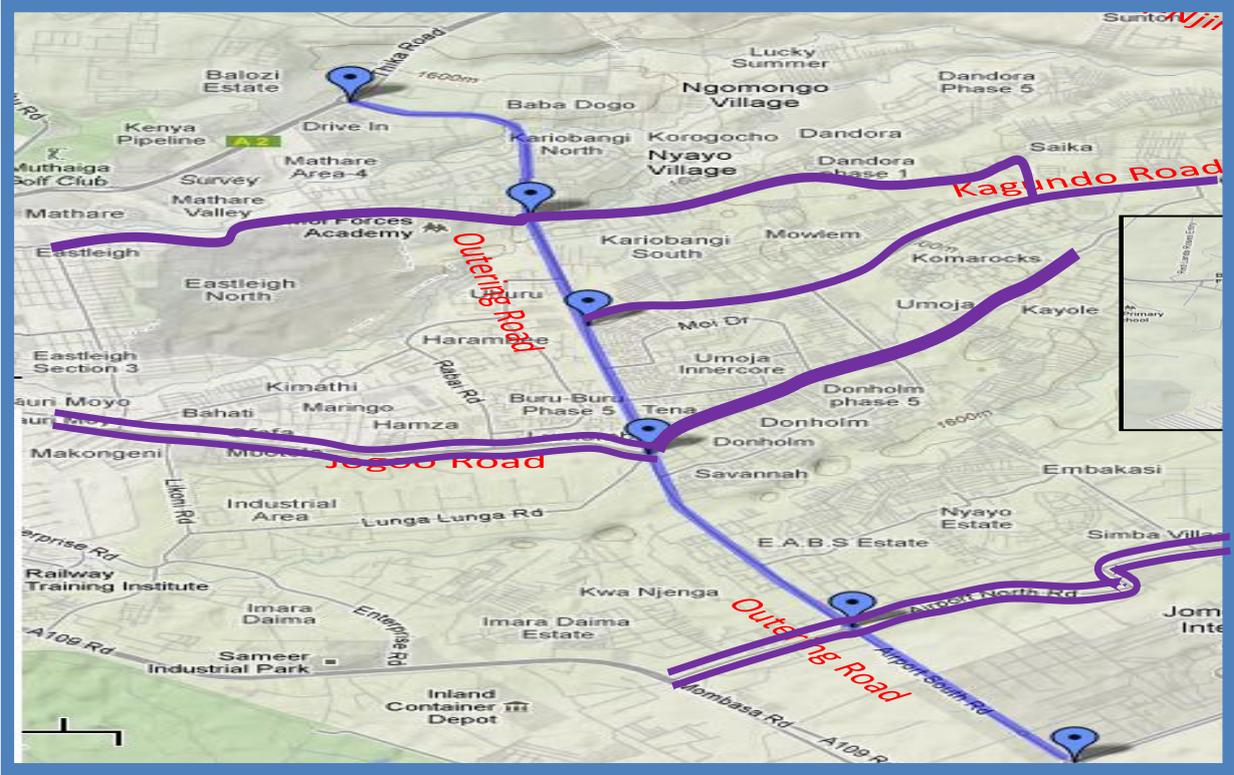
The project road is located in different zones in Nairobi North and Nairobi East District of Nairobi County. The road provides appropriate connectivity mainly of Nairobi –Thika Highway to among other corridors Eastern Bypass, Kangundo Road, Northern Bypass, Mombasa Road and the all-important Kenyan Gateway, Jomo Kenyatta International Airport. The 13km road stretch covers the following areas: Mlango Kubwa; Kiamaiiko; Huruma; Kariobangi; Umoja; Mukuru; and Embakasi. A general location plan of the project area is shown in Figure 1.

The Project involves large scale road construction in a fairly densely populated urban setting. The proposed Project aims to improve traffic flow in the city of Nairobi by constructing the 13Km Outer Ring Road to a dual carriageway standard and upgrading existing intersections

to six grade separated intersections and two underpasses, together with integrated Non-Motorized Transport (NMT) facilities for the entire road length. The Project has allowed for a 9m raised central median that will in future serve as the corridor for Bus Rapid Transport (BRT) System. For Road Safety, the proposed project has designed 10 foot-bridges that will facilitate safe pedestrian crossing. Passenger transfer stations have been designed at four locations along the corridor. Street-lighting, roadside drains, road furniture and markings have also been designed.

The City of Nairobi has been experiencing serious traffic congestion in most of its road network and various studies have been carried out in the past by different agencies with a view to recommending solutions to the transportation needs of the city. In order to address the escalating traffic congestion in the city, the Government of Kenya (GOK) through the Kenya Urban Roads Authority (KURA) proposed the upgrading of Outer Ring Road as key to decongesting traffic.

Figure 1: Outer-Ring Road Layout



3. Policy, Legal and Administrative Framework

The Environmental Management and Coordination Act (EMCA), 1999 provides for the establishment of a legal and institutional framework for the management of the environment and for matters connected therewith and incidental thereto. Just as in the new constitution, Part II of EMCA confers to every person the right to a clean and healthy environment and to its judicial enforcement. The new Constitution and EMCA therefore obligates the project’s Executing Agency and Contractor to work in a clean environment and not to contravene the right of any person within its zone of influence, to this entitlement. EMCA has provided for the development of several subsidiary legislations and guidelines which govern environmental management and are relevant to the project implementation. These include;

- The Environmental (Impact Assessment and Audit) Regulations, 2003 Legal Notice No. 101;
- The Environmental Management and Coordination (Waste Management) Regulations, 2006 Legal Notice No. 121;
- The Environmental Management and Coordination (Water Quality) Regulations, 2006 Legal Notice No. 120;
- The Environmental Management and Coordination (Noise and Excessive Vibration Pollution) (Control) Regulations, 2009 Legal Notice No. 61;
- The Environmental Management and Coordination (Conservation of Biological Diversity and Resources, Access to Genetic Resources and Benefit Sharing) Regulations, 2006 Legal Notice No. 160;
- The Environmental Management and Coordination (Fossil Fuel Emission Control) Regulations, 2006 Legal Notice No. 131;
- The Environmental Management and Coordination (Controlled Substances) Regulations, 2007 Legal Notice No. 73.

Kenya's key environmental assessment and monitoring agencies include the following;

- The National Environment Council: The Council is responsible for policy formulation and directions for the purposes of developing the EMCA. The Council also sets national goals and, objectives, and determines policies, and priorities for the protection of the environment.
- The National Environment Management Authority (NEMA): NEMA is responsible for general supervision and, co-ordination of all matters relating to the environment and is the principal instrument of government in the implementation of all policies relating to the environment. The authority is also responsible for monitoring compliance with all the NEMA regulations.
- The Standards and Enforcement Review Committee (SERC): NEMA through EMCA has established standards for the various environmental parameters that require management and these include the water quality standards, noise and vibration control standards, and the waste management standards, amongst other. SERC, through the Compliance and Enforcement Department of NEMA monitors the compliance level of the project to ensure environmental control standards are implemented. The committee also follows on complaints reported by the public.
- The Provincial and District Environment Committees: These committees contribute to decentralization of activities undertaken by NEMA and thus enable local communities to have access to environmental management information. The committees also conduct quick site visits and review environment related reports of the projects and on occasions could attend site meetings.

The Occupational Safety and Health Act, 2007, is an Act of Parliament to provide for the safety, health and welfare of all workers and all persons lawfully present at workplaces, to provide for the establishment of the National Council for Occupational Safety and Health and for connected purposes. The Act applies to all workplaces and workers associated with it; whether temporary or permanent. The main aim of the Act is to safeguard the safety, health and welfare of workers and non-workers. It is thus recommended that all Sections of the Act related to this project, such as provision of protective clothing, clean water, and insurance cover are observed so as to protect all from work related injuries or other health hazards.

There are sectoral legislation and regulations relating to various environmental aspects and that are relevant to the road project that were reviewed, including international treaties and agreements that Kenya has ratified and these have been included in the ESIA Report.

4 Description of the Project Environment

The sub-sections below describe the physical, biophysical, social and cultural environment of the project area.

Physical Environment:

Climate: In general temperatures are fairly uniform with coolest months occurring from June to August while hottest temperatures typically occur from December to March. Rainfall is bimodal in with long rains occurring from March to June while the short rainy period occurs from October to December. The mean annual rainfall in Nairobi ranges between 800 mm and 1,300 mm per annum.

Topography: Outer-Ring Road section traverses predominantly flat terrain with a few rolling sections especially at bridge locations.

Geology and Soils: The geology of the project area comprise the Nairobi Trachytes extending from Dagoretti – Karen up to the east of Nairobi, and towards north of Kiambu and Githunguri; Nairobi Phonolites between the Nairobi National Park and Kiambu and resting directly on the Athi Series; and the Kapiti Phonolites which are also overlain by the Athi Series. The Upper Athi Series formations mainly consist of sandy sediments, gravel, or pebble beds, tuffs and pyroclastic sediments.

The soils in the area are shallow, yellow-brown to yellow-red friable clays overlying a laterite horizon, nearer the Thika road axis and black cotton soils with calcareous and non-calcareous variants being dominant along the Outer Ring corridor.

Surface Water Resources and Hydrology: Mathare River, Nairobi River and Ngong River traverses the city rising from the west towards the east crossing the Outer-Ring Road. The streams provide the key sinks and modes of pollution transport without any economic value. There have been efforts on clean-up programs mainly for Nairobi and Ngong rivers and clear results are yet to show. The rivers discharge into Athi River.

Most sections in the project area are located on relatively flat terrain and this influences the surface drainage. The Outer-Ring Road traverses various characteristics of drainage zone where the first half has efficient surface drainage (influenced by Mathare and Nairobi Rivers), the middle sections (Umoja – Tena estate areas) being flat and hence poorly drained. Most road side drains in all the road sections have been highly compromised from social and economic development activities.

Land Use: The road traverses an intense development of industrial establishments from the General Service Unit (GSU) intersection to Mathare River Crossing on the Left Hand Side and at Jogoo Road-Outering Junction up to Ngong River on the Right Hand Side after the Tassia Estate. Commercial Centers such as banks, retails outlets ,fuel stations, market centers and residential estates are prominent along this road mostly high density i.e. Huruma, Kariobangi, Dandora, Umoja and Donholm estates.

Human Environment:

Administrative Setting: Outer-Ring Road is entirely located in Nairobi City County and traverses two districts of Nairobi East and Nairobi North. Going by the current sub-divisions, the road runs from East to West and is the boundary dividing various districts namely Embakasi, Njiru and Kasarani respectively to the North while Makadara, Starehe and

Kamukunji all to the South of the road. It traverses the six constituencies of Embakasi, Starehe, Kamukunji, Mathare, Makadara and Kasarani.

Population: Nairobi County has a total population of 3,138,369. Nairobi East district where the project road largely traverses has the largest share of population. The districts covered by the project road are Nairobi East and part of Nairobi North. The total population of the project districts is 2,206,502 representing 70% of Nairobi County's population. Nairobi East has a population of 1,144,416 (36.47%) and Nairobi North, 1,062, 086 (33.84%) The population growth rate for Nairobi districts is 4%.

The northern and eastern part of Nairobi City County is the most densely populated part of the City. Besides the human settlements in the area, the project area is also adjacent to the industrial suburbs of Baba Dogo, Kayole and the main Industrial Area.

The population of the areas served by the project roads is ethnically mixed with all tribes of the country being represented. The population is dominated by people in the age bracket of 20-30years (46.4%). 30-40 years (25.2%). Those below 20years and over 60years comprise 4.6% and 2.3% respectively. The population along the road corridor is predominantly Christian by religion with Muslims accounting for only 2.1% of the population.

Utilities – Water and Sewerage: The neighbourhoods served by Outer-Ring Road, is connected to the Nairobi Water Supply mains and the main sewerage reticulation system for the City that follows the natural drainage system that drains through the area. Approximately 95% of all properties along Outer-Ring Road are on main sewer. However, the areas of Mukuru Kwa Njenga and Korogocho are not sewered and the respondents reported the use of pit-latrines as the mode for domestic solid waste. The same neighbourhoods are supplied water from common stand pipes where the residents buy water for domestic use.

Waste Management: Garbage collection is in-adequate and there are mounds of un-collected garbage along the drainage corridors and road junctions. This is well pronounced in Kariobangi, Nairobi River Bridge and Kiambio Slums that are adjacent to the Mathari River. A mound of un-collected garbage that is generated from the neighbourhoods and the trading activities in the vicinity is evident along the road.

Gender and Social Relations: The household survey shows that the women are well represented in the economic life in the area and their participation is almost equal to that of the male gender. During the public consultations forums, the women were equally represented and were more vocal on issues of the community such as lack of schools and safety of the children accessing school facilities once the proposed roads are improved with faster speeds. Of particular interest was the source of capital for the women trading within the road reserve. Majority of them obtained their capital from personal savings (67.6%) while only 28.6% obtained their working capital from loans. This included those (4) who received financial support from Chama.

The status of women in road project area is highly influenced by the cosmopolitan setting that they live in that has undermined the cultural barriers that exclude them from leadership roles in the family and society and also control family resources. The level of exposure has created opportunities for the women to access all social facilities such as health care, education, ownership of property and participate in decision-making. The liberation of women is fully established in the urban setting and as manifest at the consultative forums, they are fully integrated in the development processes.

Health Facilities: Health facilities within the road project corridor comprises of public facilities sponsored by the central government or the Nairobi City County. There are also health facilities sponsored by religious organizations where services are offered at cost or private clinics that are distributed within the vicinity of the project road. Most of the health facilities are within walking distance for minor ailments and emergency cases except referral cases where the services are only available at the main hospitals of Kenyatta, Aga Khan, M.P. Shah and Mater Hospitals.

The principal mode of transport to health facility is walking where the distances are less than 2km. and public transport where the distances are greater. The farthest distance to hospital is 10km, being the distance to Kenyatta National Hospital. Most of the facilities are less than 1km. from the residences. The common diseases prevalent in the project area as reported in the household survey include malaria (23.7%), stomach problems and diarrhoea (21.7%), respiratory complaints (10.5%) and eye infections (9.7%).

HIV/AIDS: HIV and AIDS continue to be a major public health and socio-economic challenge adversely affecting all the sectors of the Kenyan economy. The 2007 Kenya Aids Indicator Survey (KAIS) indicates that 7.4% of Kenyans aged 16 - 64 and 7.8% of adults age 15-49 are infected with HIV compared to 6.7% in the 2003 Kenya Demographic and Health Survey (KDHS) and 5.1% in 2006 Sentinel Surveillance Survey. Approximately 1.4 million people were living with the virus as at the end of 2007. More women are infected with the HIV (8.7%) compared to men (5.6%).

Embakasi constituency has a prevalence of 6.4 % (PMTCT ANC prevalence- DHIS 2012). Approximately 5 ART facilities lie in the proximity of the planned dual Outer Ring Road between GSU round about and Taj Mall. The facilities offer ART services among other health services to approximately 3951 PLHIV as at end of 2012.

Table 1: HIV/AIDs statistics for December 2012

No.	Name of facility	Patients started on ARVS as at end of 2012	Patients on prophylaxis as at end of 2012	Enrolled eligible but not started on ART as at end of 2012
1.	APTC Health Centre	18	452	9
2.	Coni Health Centre	316	2055	366
3.	GSU training school	26	430	23
4.	St Bartkita Dispensary Utawala	20	26	6
5.	Pipeline Nursing Home	50	126	28
	Total	430	3089	432

Settlement Patterns and Housing Conditions: There are wide variations in population densities reflecting different land use patterns within the districts. The districts have an average population density of 4,531 persons per Km². Nairobi North District has the highest population density of 7,721 persons per km². Huruma location has the highest population density of 77,656 persons per Km² in the corridor. These settlement patterns have been influenced greatly by various factors such as rural urban migration, well developed infrastructure and the many employment opportunities associated with Nairobi City.

The project districts have over 16 non-formal settlements (slums). 42% of the populations live in these informal settlements. Mukuru Kwa Njega, Huruma and Korogocho other slum areas form the bulk of uncontrolled urban settlements in the district. These areas are characterized by uncontrolled squatter settlements created by low income migrants. In these slums, there is overcrowding with inadequate social facilities like education, health, water and sanitation among others. Mathare 4A, Eastleigh, and Kariobangi estates combine both old housing and

new institutional housing estates.

Areas like Umoja, Embakasi, Donholm, Tena and Fedha estates have a mixture of high-rise buildings, single units and semi-permanent houses. Some of the high-rise buildings are self-contained while others are single rooms. The main feature with these dwellings is that they have been modified from the original structural design.

Socio-cultural Profile: The road corridor depicts a population with ethnic cosmopolitan and residents are bilingual in English and Swahili. In addition, a large percentage speaks their ethnic tribal mother tongue. Composition of the many ethnic groups resident along the project areas differ from one area to another. However the dominant ethnic groups include the Kikuyu, Luhya, Luo, Kalenjin, Kamba, Kisii and Meru. There are also few non-Africans consisting of Asians, Europeans and Arabs.

Economic Activities: The economic activities along the project road corridor range from modern formal sector that includes wages and salaried employment in the private and public sector. The informal sector include retail trade activities that are mostly prevalent in the low class estates and consist of petty trade (Green groceries, “juakali”, hawking). 50% of the residents are engaged in businesses, 22% are employed and the rest are engaged in various activities. These businesses consist of both small scale and large scale informal establishments undertaking transport, storage, Fruit vending, shop-keeping, hotel and restaurants as well as furniture and general wares. Others include Shoe shiners/menders, Firewood selling, maize roasting, sale of credit cards and sweets, welding, charcoal dealers, newspaper and textile (mostly second hand cloth) vendors. There are a number of major markets on the project road including Kariobangi.

Biological Environment:

Vegetation: The natural vegetation along the corridor has been greatly modified and destroyed. The increase in the population as well as developments in the project area has contributed to the destruction of the vegetation so as to cater for the increasing pressure on the land resources. In the open space there is grass and shrubs present while at the residential areas the trees, shrubs and ornamental plants dominate. Along the River riparian there is the replanting of trees and grass to help protect the water resources.

Fauna: There is no notable wild animal’s presence in the project area, mainly due to human habitation and extensive economic activities.

5. Project Alternatives

The total annual pollutant emissions expected under existing conditions and future conditions were estimated. The future conditions were assessed with or without the alternative designs. The pollutants considered included Volatile Organic Compounds (VOC), Nitrogen Oxides (NO_x), Carbon Monoxide (CO) and Hydrocarbons (HC) which are some of the common Green House Gases (GHG).

The vehicular emission rates associated with each of the pollutants were assessed based on the typical vehicular profile comprising Japanese and European vehicles, composition and age in Kenya and disaggregated according to various travel speed ranges. Based on the developed emission rates, Average Annual Daily Traffic (AADT) volumes and average travel speeds for each scenario, the total annual emissions were estimated for each scenario as shown in Table below.

Table2: Estimated Annual GHG Emissions for Each Alternative /Scenario

Alternative / Scenario Assessment	Max AADT	Travel Speed (km/h)	Travel Time (mins)	Emissions Per Year (Tons)			
				VOC	NOx	CO	HC
Existing - 2012	20,400	10	60	413	345	1,605	300
Future - 2032 (Do Nothing)	55,700	6	98.0	1,131	942	4,389	821
Alt 1: Future – 2032 (6 Lane)	55,700	70	8.4	393	523	1,225	253
Alt 2: Future – 2032 (4 Lane with BRT)	47,400	76	8.0	334	445	1,041	215

The Do Nothing Scenario would result in the highest emissions on the Outer Ring Road. Failure to implement any improvements on the road would result in even lower travel speeds than are currently experienced and those are associated with elevated pollutant emission rates. Alternative 2, which has the 4 lane design with the Bust Rapid Transport (BRT) system will result in the least quantities of GHG emissions. This is because it will provide the highest average travel speeds and have reduced traffic volumes due to the BRT operations within the corridor.

6. Potential Impacts and Mitigation Measures

Positive Impacts:

Reduction in Green House Gas (GHG) Emissions: Motorized transport is by far the most dominant and is a major source of pollution and emitter of GHG, especially in the urban areas. Emission of GHG by vehicles is due to traffic congestion, poor servicing, and large number of old second hand vehicles, poor infrastructure and poor road conditions. The preferred alternative (Alternative 2) for the proposed road project will result in the least quantities of GHG emissions since it will drastically reduce traffic congestion and reduce residence time of vehicles along the corridor from 2 to 3 hours to 10 minutes.

Reduction in Travel Time and Costs: Construction of the dual carriage way will significantly shorten the travel time between GSU roundabout and Jomo Kenyatta International Airport due to reduced traffic congestion. Currently it takes 2 to 3 hours to traverse the 13 Km road corridor. After the construction of the road, it will take 10 minutes to travel through the Outer Ring Road.

The traveling public will benefit from an improved carriageway with better transport movement and safer infrastructure. This will lead to a reduction in travel times associated with increased speeds due to a better road and improve movement of persons and goods and ultimately increase economic activity. The overall impact will therefore include an improvement of the living standards of the host population through better incomes due to access to bigger markets and social services.

Creation of Employment: During the construction period, over 1000 new jobs will be created in the form of skilled and unskilled labour. The majority of unskilled labour will be sourced from the project district. Indirect employment will be in the form of suppliers and other forms of sub-contracted works that will be required for construction. Support to businesses such as food kiosks may also be set-up near the contractor's camps and along the road. In the operation phase of the project more job opportunities will arise in various sectors such as the transport industry, commerce and trade. Taken together, job creation will help to reduce the problem of unemployment with attendant improvement in income for the workers' household and revenue.

Improved Access to Social Services: Upgrading of the road will improve access to schools, health facilities, business centers, places of worship such as mosques and churches. The

project road will also benefit the poor people who do not own private cars and rely on public transport.

Reduced Traffic Congestion: The dualling of the road will facilitate efficient, fast and cost effective transport. This is likely to lead to increased use of public transport and a corresponding decrease in the use of private cars. The impact will be further reduction in traffic congestion. This also will have positive impact on reducing the level of air pollution in the urban areas because of greenhouse gas emissions from vehicles. Factors such as cost of gasoline, improvement in travel time even for parts of a journey may motivate people to consider using public transport rather than use of personal cars.

Air Quality: During construction, increased traffic volume and movement of construction equipment, construction activities (extraction, transport and stockpiling of materials, excavation, compaction etc) will cause deterioration of air quality due to generation of dust. Another source of air pollution is emissions from equipment and vehicle exhaust.

The impact due to dust generation during construction shall be mitigated by sprinkling water, while that due to emissions shall be mitigated by ensuring adequate maintenance of construction equipment, including engine fine tuning, avoiding unnecessary idling of the equipment.

Improved Travel Safety and Comfort: The road project will generally increase travel safety and comfort. With the improvement of the road, public transport business will be more competitive and it is likely that transporters may opt for better and bigger public transport buses.

Drainage and Hydrology: Stakeholders indicated that there are serious storm water drainage problems along Outer Ring Road, especially between Umoja and Donholm junction. Overall, the hydrology and drainage of the road will be improved due to the upgrading of the road structures, such as bridges, culverts and other cross-drainage facilities like roadside drainage. Sedimentation of culverts and road side drainages will be eliminated due to provision of control devices and cover vegetation and water stagnation within and the on the road side will be eliminated.

Increased Land Value: The project road will increase land value in the impact area and modify its use and occupation patterns along the corridor. The project area could be attractive to big investors.

Negative Impacts:

Loss of Assets: In the implementation of the road improvement and up-grading to dual carriage-way, it is estimated that 445 informal businesses (Hawkers) will be displaced from the road reserve and will require to be compensated. The Nairobi City County has eight (8) possible locations mainly existing markets where some of the traders along the road corridor could be relocated. Although the existing capacity of the market stalls is reckoned to be fully occupied, the markets can be expanded to accommodate the affected persons. These markets are along the project road at: Kariobangi North, Kariobangi South, Tassia, Kiamaiko, Baba Dogo, Umoja, Tena and a wholesale Market Site (Kangundo Road).

Some of the trading activities were considered not possible to be accommodated by the County in the above sites and therefore, these people would be compensated as they too have suggested at various forums. These activities include: Garages, Furniture Shops, Building Materials and Hardware, Car Sale Yards, Car Wash, Metal Fabrication. To mitigate the

impact all affected people who are entitled to compensation will be compensated accordingly before commencement of construction activities.

Land Take: A total of 177 properties will be affected by the road widening to dual carriage-way and may entail compulsory acquisition for the road improvement purpose. This is the total number of parcels that have title deeds including those that have encroached on the land reserved for the improvement. The property owners of land that is legitimately in their possession will be compensated at the statutory rates (replacement costs and disturbance including loss of any business, if applicable) inclusive of any other relief applicable.

Traffic Management: Construction focusing on the project road and the intersections will generate traffic problems which will require good traffic management planning to ameliorate this. Traffic management planning for the construction phase shall include the preparation of detailed phased construction plans which will guide traffic flow during each stage of construction, in order to keep traffic flowing. Suggestions of possible roads for traffic diversion has been studied and highlighted. The movement of heavy vehicles bringing in materials shall be accompanied by alert vehicles. The contractor shall ensure that effective road signs have been placed at all key spots including diversions.

Risks of Accidents: Increased traffic volume and activities during construction are likely to cause accidents. The mitigation measures proposed include (i) approximately 10 foot bridges have been designed to be constructed every 500m along the corridor (ii) a road safety awareness campaign will implemented during and after construction, targeting all the local communities, including transporters, road users, school children, teachers, parents, patients, and hospital staff (iii) a Children's Traffic Safety Park will be constructed and used for education and awareness on Road Safety issues.

Occupational Health and Safety Considerations: The Contractor shall develop a Health and Safety Plan on occupational health and safety of staff/workers and community health and safety of people living nearby or potentially affected by the project road. The considerations of environmental health and safety shall include (i) an assessment of traffic accident hazards, including spillages of transported substances into waterways and emergency response planning; (ii) provisions for pedestrian and non-vehicular traffic during construction periods; (iii) training and awareness programs for community in road safety (especially in schools); (iv) occupational health and safety of the construction staff (v) securing of excavations and trenches and (vi) safety equipment and signage during construction and operation of the road project.

Generation of Noise and Vibrations: Noise and Vibration are expected during construction due to machinery operation and transport activities. There are many types of foundation vibration sources caused by construction works, and they are mainly caused by piling foundation works, foundation improvement works, land compaction operation, and the operation of heavy transport vehicle. The increased noise and vibrations will cause agitation, impair communication or weaken foundations of existing buildings leading to cracking walls.

The impact to the public due to increased level of noise and vibrations during construction will be mitigated by ensuring adequate maintenance of the vehicles, including proper fine tuning of engines. In addition, all equipment shall be fitted with exhaust mufflers. The Contractor will need to undertake assessment of building structures within the work areas with respect to their capacity to withstand compaction vibrations. The contractor shall not be allowed to carry out construction works close to residential areas during the night. As for construction workers, all workers working in severe noise environment such as the quarries and crushers, shall be equipped with ear plugs.

Increased transmission of HIV/AIDS: During construction, interaction between workers and the residents may exacerbate the spread of HIV/AIDS and other sexually transmitted infections. The Contractor's workforce will be sensitized with regard to behaviour and conduct, and an HIV/AIDS Awareness Campaign will be implemented.

Disruption of Public Utilities: Various public utilities like water pipes, sewerage systems and power lines cross or run close to the road. During construction, these utilities are likely to be affected by the construction activities. The water pipe lines will be disrupted making the service unavailable to the host population. The Contractor will need to prepare a utility relocation plan and liaise with the utility providers to ensure minimal damage and disruption of services.

Pollution of Water Resources: Construction across river systems is likely to exacerbate pollution of the three rivers crossing the project road. Pollution may result from construction materials (concrete, fill material etc), including hazardous materials (motor oil, paint, bitumen etc). In addition, sedimentation of the river systems is likely to occur if construction is not done with care. The contractor shall implement the following measures near the rivers: isolate concrete works, avoid washing concrete handling equipment, avoid re-fuelling and servicing, avoid stockpiling of materials or wastes, and ensure no leakage from equipment working near water courses. In addition, works across the rivers shall be done during dry season.

Generation of Wastes: Construction activities at the sites will generate significant amount of wastes: solid wastes such as plastic containers, used tyres, used printer cartridges, metal parts, plastic and cable, batteries, and liquid wastes such as used motor oil, and sanitary wastes. The main issues will be disposal of the wastes. These wastes shall be responsibly disposed of in accordance with NEMA waste Management guidelines and at the Nairobi County approved sites. Once the project is completed, all work areas and offices, storage and repair sites, and other temporary installations must be cleaned and restored. A rehabilitation plan must be prepared and approved by the Supervising Engineer, that ensures that damaged areas are rehabilitated and the sites are compatible for potential future uses.

Insecurity: The project districts have over 15 police posts /stations. Crime rate in the project areas is 62% with the main type being robbery, murder and manslaughter, theft of property and violation of children rights. Maintenance of law and order is therefore a major challenge. Insecurity in the area is caused by moral decay in the society, lack of employment opportunities, poverty, rural urban migration and rapid population increase. The Contractor will need to liaise with the local security operatives and develop a security plan to protect the project equipment and staff.

7. Environmental Hazard Management

The failure of environmental mitigation can result in serious impacts such as erosion, increased road accidents and disruption of the community lifestyles. Construction of roads also involves occupational health and safety risks to road workers, primarily in the areas of storage and handling of dangerous materials, and operation of heavy machinery close to traffic, slopes and watercourses. The anticipated risks in this project include: (i) Exposure to excessive dust particles or toxic fumes from bitumen and other chemicals used in road works; (ii) Potential for collapse of trenches; (iii) Risk of accidents involving passing traffic; (iv) Risk of rock falls during blasting; and (v) Risk of fuel spills and therefore contaminating soil, surface water and groundwater.

The risks can be mitigated to a large extent through: (i) Strengthening staff skills and training in environmental management; (ii) Monitoring environmental actions and responsibilities and making provision for remedial actions; (iii) Planning for remedial measures in case initial planned actions are not successful; (iv) Limiting time of exposure to dust particles, chemicals and noise; (v) Establishing safety and inspection procedures in materials handling, operating heavy equipment and constructing trenches; and (vi) Safe handling of toxic materials, explosives and other hazardous substances.

The Contractor shall submit a Traffic Management Plan and an Emergency Response Plan containing Method Statements covering the procedures for the main activities which could generate emergency situations through accidents or neglect of responsibilities. These situations include, but are not limited to: (i) Accidents at the work place; (ii) Accidental fires; (iii) Accidental leaks and spillages; (iv) Vehicle and plant accidents and (v) traffic snarl up and (vi) security of plant and equipment.

8. Monitoring Programme

The purpose of environmental and social monitoring is to quantitatively measure the compliance of the contractor on the implementation of the proposed environmental and social mitigation measures as well as the effectiveness of the mitigation measures. The environmental monitoring program will operate through the preconstruction, construction, and operation phases. It will consist of a number of activities, each with a specific purpose, key indicators, and significance criteria.

The following aspects, each having a specific purpose, defined key indicators, and significance criteria, will require monitoring: (i) Air Quality and dust emission; (ii) Noise and vibrations; (iii) Restoration of borrow sites and quarries; (iv) Prevention of pollution of surface water; (v) Disruption of public utilities (domestic water supply, sewerage, power lines); (vi) Disposal of wastes; (vii) Compensation of properties; (viii) Road safety; and (ix) HIV/AIDS prevalence rates.

The monitoring of implementation and effectiveness of mitigation measures will be carried out by an Environmental and Social Officer (ESO), who will be part of the road construction supervising consultant. The ESO will have the following specific responsibilities: (i) to meet twice per month with the consultant and contractor to discuss work requirements, compliance issues, and environmental matters; (ii) to inspect various aspects of the work area and equipment for general housekeeping, dust, fume, noise and compliance with spill prevention plan; (iii) to monitor environmental parameters for comparison with available or proposed standards.

The ESO will provide reports on environmental compliance during implementation as part of their monthly, quarterly progress reports and annual environmental monitoring reports to NEMA and the Bank. Depending on the implementation status of environmentally sensitive project activities, the regulatory agencies and NEMA will perform annual or biannual environmental reviews in which environmental concerns raised by the project will be reviewed alongside project Implementation. The responsibility for mitigation monitoring during the operation phase will be on the hands of KURA. It is estimated that the cost of monitoring the ESMP is estimated at KSh 12,000,000.

9. Public Consultations and Public Disclosure

Stakeholder consultations for the proposed road project were conducted in order to capture the major concerns associated with the project from all concerned and interested parties. The consultant held three public meetings along the corridor during the development of the ESIA Report. A Stakeholders Consultation Workshop was held on 21 March 2013. The participants included representatives of community based associations such as the Transporters Association, the Traders (Jua Kali) Associations, Market Owners, Parents Association (Schools), Athi Water Services Board, Nairobi City Council, Kenya National Highways Authority and Kenya Urban Roads Authority.

The stakeholder consultative meetings provided views, opinions and suggestions on the most appropriate considerations on the construction and use of the proposed road. The sessions also laid out fears and concerns to be addressed during construction. To ensure that both women's and men's views were taken on board in the project design; public consultations were conducted in an all-inclusive manner. The consultations sought community participation and instant feedback into the project design especially related to matters of road alignment / design, resettlement and compensation. The consultations created awareness and identified positive and negative socio-economic impacts of the road project, proposed mitigation measures to address the potential impacts during project implementation and operation.

The following are some of the issues and concerns raised which were responded to and as much as possible recommendations have been incorporated in project design: (i) road safety measures for school children; (ii) public appreciation of the road owing to its importance; (iii) high expectations (direct and indirect employment from the project, development and improvement of businesses, provision and enhanced access to social amenities, reduction of travel time); (iv) fears and concerns associated with the road including increased road accidents and increased HIV/AIDS; (v) timely and fair compensation; (vi) road drainage and flooding especially between Umoja (Km 5+500) to Manyanja (Km 6+700) and Donholm area; (vii) establishment of bus terminus & bus bays; (viii) waste management along the corridor; (ix) traffic management and security provision for road users during construction (x) establishment of a Grievance Mechanism not only for PAPs but all road users and the need for continuous information sharing; (xi) noise and excessive vibrations during construction; and (xii) care and/repair of utilities and public infrastructure destroyed/disturbed by construction works.

10. Complementary Initiatives

Several complementary initiatives shall be implemented as part of the project. These include:

Road Safety Campaign and Children's Traffic Park: One of the major issues raised by stakeholders is that of increased road accidents as was experienced in the Nairobi – Thika road. In addition to providing funds for conducting road safety campaigns, the project shall make a provision for constructing a Children's Traffic Park which are intended to give school children a real life experience of road dynamics and how they can safely cross roads. A similar park exists in Nairobi City's Central Park. The project shall therefore, finance (i) construction of a Children's Traffic Park in the vicinity of the project road, (ii) construction of foot bridges at designated crossings (iii) conduct, in collaboration with National Transport and Safety Authority (NTSA), road safety campaigns for communities and schools in the project area both during construction and implementation; and (iv) finance production of propaganda materials for inclusion as extra-curricular activities in schools and introduction of Safety Wardens to assist children cross roads.

Disruption to Utilities (Water Provision, Power Lines and Communication): During public consultations, concerns were raised regarding the possible disruption of services and utilities and the duration it takes for utilities to be reinstalled during construction. KURA will set out service standards guiding the maximum period during which each of the utilities can be disrupted before being reinstalled. Of critical importance are water supply systems and power lines.

HIV/AIDS and Communicable Diseases: The project design shall incorporate setting up three Wellness Centres along the project road. The Wellness Centres have been recommended by the National AIDS Control Council (NACC) as an effective way of dealing with a variety of HIV/AIDS or Health issues without stigmatization. The Centres have been experimented by NACC and Ministry of Health in 6 locations across the country and have become a one-stop-shop for HIV testing and counselling; blood group matching; malaria testing; diabetic checks; STI testing; etc. NACC have provided a design which is mainly a three-room block. KURA is expected to identify sites either for new construction or for rehabilitation of existing health centres, preferably at the two road end points and in the middle (Umoja/ Mutindwa). There are on-going consultations with Nairobi City Council Department of Health and the Ministry of Health on provision of staff and meeting recurrent costs of the Centres.

Gender Mainstreaming Plan of Action: In line with the Bank's policy on Gender, the project plans to mainstream gender and ensure equal opportunities between men and women in project planning, implementation and benefits. Women together with men have fully participated in the consultation process and views of both genders have been incorporated in the project design. As part of women's economic empowerment, the project shall apply the national practice of allocating a quota of at least 30% of jobs to women at the construction site.

Further, recommendations have been made for a Project Specific Gender Plan of Action. These should include, but not limited to: provision of ablution corners; adequate and secure accommodation for women; resting space dedicated for women; code of conduct to prevent abusive language and unwanted approaches at the work place; consideration of particular needs of both men and women especially during resettlement and compensation; and in the design and determination of activities aimed at the control of the spread of HIV/AIDS and STI. The project will also construct market stalls at designated locations for the women (*Mama Mboga*) trading in fresh foods (fruits and vegetables).

Youth Involvement Program: The project will ensure that youth are involved in various aspects of the project. The RAP reported that there are youth undergoing apprenticeships at the local garages along the corridor that will be affected. Youth will be sensitized to register their skills into a database. KURA will establish a mechanism to identify the youth who qualify for training to attend artisan courses at the Kenya Institute of Buildings and Highways Technology (KIBHT). The trained youth will then be given opportunities during construction to gain experience. Further, the National Aids Control Council (NACC) has a database or orphaned and vulnerable youth in the project area that are qualified to work on the construction sites or be employed in the Wellness Centres. KURA will ensure that the said youth and orphans are employed on the project.

Landscaping and Trees Planting program: The project shall support the efforts of the City Council to beautify the City through planting of trees and shrubs to beautify the city, replace trees that may be cut down during construction, protect the road reserve; planting trees that will contribute towards sequestering carbon emissions. KURA will engage a Landscape Architect to develop a suitable design and specifications for the urban road setting.

Resettlement/Compensation (RAP): The details and estimates for Resettlement and Compensation are included in Annex 1 of this summary.

11. Conclusion

There is generally a high appreciation of the proposed project and broad acceptance by a majority of the residents and stakeholders. However, following previous experiences in road construction where encroachments have been the key focus, there is concern over how effective and efficient the Compensation Plan will be implemented. The other concerns include management of utility relocation, minimization of disruption of services during construction, road safety measures for the host population and school children and traffic management. The Contractor shall prepare a Comprehensive Contractor Environmental and Social Management Plan (CESMP) immediately after Contract Award. The CESMP shall be submitted to KURA and the Bank for approval prior to commencement of construction.

Most of the project negative impacts can be mitigated with appropriate measures. Involvement of the Executing Agencies, the Contractor(s) and the relevant stakeholders and authorities and the local communities will be required to implement and monitor the implementation and effectiveness of the proposed mitigation measures.

References

Environmental and Social Impact Assessment and Environmental Social Management Plan for the proposed Improvement and Dualling of the Outer Ring Road C59, June 2013 by APEC Consortium/CES.

Resettlement Action Plan for the proposed Improvement and Dualling of the Outer Ring Road C59, May 2013 by APEC Consortium/CES.

Feasibility Studies and Detailed Engineering Design Report of Outer Ring Road C59 by APEC Consortium/CES, May 2013.

RESETTLEMENT ACTION PLAN SUMMARY

Project Name : **Nairobi Outer Ring Road Improvement Project**
Country : **Kenya**
Project Number : **P-KE-DB0-020**

1. Introduction and Background

The Government of Kenya, through the Kenya Urban Roads Authority (KURA) has earmarked Outer-Ring Road in Nairobi City County for improvement and dualling. The project road is currently motorable and is located in a highly built-up corridor with residential houses, medium to high commercial features and low level industrial activities. The road is a 13 km stretch with a bitumen surface 2-lane single carriageway. Currently, the road is characterized by very heavy traffic jams. The road connects the Nairobi-Thika Highway (A2) to Mombasa Road (A109/104). African Development Bank (AfDB) has expressed interest to finance the Outer-Ring Road Project.

This summary therefore provides highlights on the project location and affected sites; objectives of Resettlement Action Plan; scope of the RAP; public consultations; legal and institutional framework; social economic survey and PAP census; eligible criteria; potential impacts and mitigation measures; income restoration program; implementation arrangements; implementation process; RAP implementation activities and schedule; grievance redress mechanism; resettlement budget; monitoring and evaluation; and conclusions and recommendations.

2. The Project Location and Affected Sites

The project road is located in different zones in Nairobi, Nairobi North and Nairobi East Districts of Nairobi City County. The road provides appropriate connectivity mainly of Nairobi –Thika Highway to among other corridors: the Eastern Bypass, Kangundo Road, Northern Bypass, Mombasa Road and Jomo Kenyatta International Airport (JKIA). Among the areas covered by the project are shown in the table below.

<i>Road</i>	<i>Length</i>	<i>County</i>	<i>District</i>	<i>Divisions</i>
Outer-Ring Road	13km	Nairobi	Nairobi North and Nairobi East	Mlango Kubwa Kiamaiko Huruma Kariobangi Umoja Donholm Pipeline Tassia Mukuru Embakasi.

3. Objectives of Resettlement Action Plan

The objectives of Resettlement Action plan are:

- To raise awareness of the project and its consequences among the public in general and those who will be directly affected by it in particular;
- To estimate the cost necessary for compensation, resettlement and land acquisition;
- To prepare Resettlement Action Plan (RAP) that sets out strategies and schedules to mitigate adverse effects.

The RAP sets the parameters and establishes entitlements for project affected persons (PAPs), the institutional framework, mechanisms for consultation and grievance resolution, the time schedule, budget and proposed monitoring and evaluation system. The agreed entitlement package includes both compensation and measures to restore the economic and social base livelihoods and wellbeing of those affected, respectively. A detailed social assessment was carried out for Outer-Ring Road. An Entitlement Matrix was prepared to define categories of PAPs and types of mitigation measures.

4. Scope of the Resettlement Action Plan

The scope of the resettlement action plan will ensure that all guiding principles of the various lenders are adhered to. Specifically, the African Development Bank's Involuntary Resettlement Policy (2003). The Policy requires the borrower to prepare a full resettlement action plan for any project that involves a significant number of people (200 or more persons) who would need to be displaced with a loss of assets, or access to assets or reduction in their economic and livelihood. Compensation shall be based on full replacement costs.

Due consideration will be given to all legal instruments and national policies that govern the payment of compensation for loss of assets and rights as a result of compulsory acquisition of land with attendant consequences of involuntary displacement in favor of public purposes. These will be harmonized with the guidelines of the lenders that take precedence over national policies to ensure that project affected persons are left better off after the effects of the project implementation.

5. Public Consultations

An effective resettlement planning requires continuous and thorough consultations with a wide range of project stakeholders in the general area of the project. These include individuals or groups who will be positively or negatively affected by the project including potential host communities.

Comprehensive consultations have been held with various stakeholders from the reconnaissance stage through the public consultations for baseline socio-economic household survey. At this stage for household survey, the data was sifted for determination of the potential project affected persons within the road corridor. The consultations were aimed at seeking the views of the local communities along the project road on various aspects of the design. Secondly, the public consultation forums served to create awareness to the local community on how the project would impact on their daily lives during and after the improvement.

Prior to the conduct of the socio-economic survey, meetings were held with the government officials and other opinion leaders among the community to sensitize them on the project and its effects on the socio-economic aspects of the community. The issue of the project affected

persons as a result of the project was highlighted and the participants appraised on the mitigation measures available by the project.

The process of carrying out the assessment for the PAPs and their assets was also explained for awareness to form a basis for further discussions. Public consultations were held at various locations as determined by administrative boundaries for ease of administration and management of the stakeholder composition and record keeping for future reference and analysis. The list of public officers and civil society to be involved in the process was exhaustively compiled as representatives of interventions taking place on development matters in the project are where they serve as a bridge of empowerment for local communities. A special forum was arranged for the Civil Society groups and the vulnerable groups including youth, women and people with disabilities.

6. Legal and Institutional Framework

The RAP is prepared in accordance with the Kenya Government legislations and AfDB guidelines and safeguard policies that govern preparation of Resettlement Action Plans. The relevant national legislations and AfDB policies and guidelines considered among others are as follows:

- The Constitution of Kenya 2010;
- Land Act No.6 of 2012;
- The Prevention, Protection and Assistance to Internally Displaced Persons and Affected Communities Act, 2012;
- HIV/AIDS Prevention and Control Act (Act No.14 of 2006);
- Urban Areas and Cities Act, 2011;
- Kenya Roads Act, 2007;
- Traffic Act Cap.403 ;
- Public Roads and Roads of Access Act, Cap 399;
- Physical Planning Act Cap 286;
- AfDB Environmental Policy, 2004;
- AfDB Involuntary Resettlement Policy, 2003;
- AfDB Gender Policy, 2001 ;
- Bank Group Policy on Poverty Reduction , 2004;
- Policy and Guidelines on Cooperation with Civil Society Organizations (CSOs), 1999.

7. Social Economic Survey and PAP Census

The census with an assets inventory for the project affected persons and a household survey, is an important component in the planning for resettlement of the affected persons. The project road corridor falls within the planned urban setting where the road reserves are dedicated in the urban plans for road purposes. Eight (8) interviews were conducted in the census of the PAPs and the subsequent household surveys. The socio-economic survey of the communities along the Outer-Ring Road was conducted during the months of October and November 2012 and covered 365 households along Outer-Ring Road catchment area. These households were randomly interviewed to determine their socio-economic profile. On the basis of the initial findings from the census data of the traders along the road, the household survey was conducted in the areas that were disclosed from the census.

In view of this, land acquisition will be required for junction improvements as corridors are adequate for the proposed design. However, during the census for assets inventory and baseline survey along the road corridors, it was established that there were encroachments on the road corridor along Outer-Ring Road with permanent improvements besides temporary

occupation of the road reserve by informal businesses in temporary structures. Approximately 445 businesses in temporary structures (Hawkers) categorized in 28 informal business activities, 17 places of worship (in temporary structures) and 177 business-cum-residential and 3 petrol stations including un-developed plots that have encroached on the road reserve will be affected. Out of the 177 properties, 35 are developed with permanent structures and partly encroaching on the road reserve.

Type and number of activities affected within project road by sections

Activity	Eastern Bypass- Ngong River	Ngong River – Nairobi River	Nairobi River – Thika Road (A2)	Total
Number of Activities				
Chicken/Poultry	2	2	-	4
Boutique	6	14	6	26
Fruit Vendors	2	17	3	22
Kiosks/Groceries	11	12	2	25
Charcoal	1	-	-	1
Shoes/Cobblers	2	3	-	5
Hotel/Food Kiosks	9	10	7	26
Furniture	15	45	-	60
Timber Yards	4	13	1	18
Building Materials	-	5	2	7
Car Wash	5	1	-	6
Tree Nurseries	6	1	-	7
Garage/Mechanic	7	10	12	29
Mitumba/Clothes	21	7	-	28
Metal Fabrication/Welding	2	11	5	18
Hardware	4	7	11	22
Auto Spares parts	3	5	7	15
M-Pesa	1	1	1	3
Scrap Metal	1	10	10	21
Sign Writers	1	4	3	8
Vegetables/Mama Mboga	11	12	31	54
Car Sales Yard	-	8	3	11
Auctioneers	-	1	--	1
Snacks	3	4	1	8
Salon/Barbers	-	1	-	1
Waste paper	-	-	1	1
Printing	-	4	-	4
Miscellaneous	2	6	6	14
TOTAL	119	214	112	445

The cut-off dates for the project affected persons census and assets inventory was agreed to be the last day of the census exercise. The last date for the assets inventory and census for the project affected persons was 13th November, 2012. This was agreed upon at the consultative forums as the cut-off date.

8. Eligibility Criteria

For the Outer-Ring Road Project the following groups are entitled to compensation and/or assistance under the project:

- **Project Affected Persons (PAPs)** - These include populace, households regardless of their ownership status as squatters etc., that will face their living adversely affected and/or lose their right or title on land, house, habitat, water resource or any asset possessed, due to the project implementation.

- **Project Affected Families (PAFs)** – All members of a project affected household residing under one roof and operating as a single economic unit, who are adversely affected by the project or any of its components.
- **Significantly Project Affected Families (SPAfs)** – The affected families who lose 25% or more of their land or income or a residential house because of project intervention.
- **Displaced Family** – Any tenure holder and his/her family members, tenant, Government lessee or owner of property, who on account of acquisition of his/her land or other property for the project purpose, has been displaced from such land or property.
- **Squatters** – People who have occupied land violating the laws and are not entitled to compensation for lost land under this policy. But if displaced they are entitled to resettlement assistance.
- **Vulnerable Groups** – Distinct groups of socially distressed people who might suffer disproportionately from the effects of resettlement. These may be ethnic minority/indigenous, women headed households, impoverished youth, the most poor (based on the poverty line), the disabled, elderly and landless/families.

9. Potential Impacts and Mitigation Measures

Negative Impacts

The envisaged negative impacts along the road corridor segments will include:

- Increase in road accidents and traffic congestion during construction phase as a result of diversions and speed controls within construction areas;
- In migration into the area after the road improvement, pushing up land values with possible buying out of the residents due to higher demand for land;
- Disruption in lifestyles and living habitats particularly school-going children, old and sick people living near the construction sites; and
- Loss of assets such as business structures, property walls, means of livelihoods and access to social services and even to individual homes.

Mitigation for Negative Impacts

a) **Loss of Assets**

In the implementation of the road improvement and up-grading to dual carriage-way, it is estimated that 445 informal businesses (Hawkers) will be displaced from the road reserve and will require to be relocated or compensated. The Nairobi City County is being consulted as a member of the Project Advisory Committee and Resettlement Committee to deal with identification and allocation of alternative sites for the PAPs to continue earning their livelihoods. During consultations with the County Chief Officers on 3rd May 2013, it transpired that there are eight (8) locations, mainly existing markets, where some of the traders along the road corridor could be relocated. The markets will be expanded to accommodate the affected persons. These markets are along the project road at: Kariobangi North; Kariobangi South; Tassia; Kiamaiko; Baba Dogo; Umoja; Tena; and Wholesale Market Site (Kangundo Road).

Some of the trading activities were considered not possible to be accommodated by the County in the above sites and therefore, these people would be compensated as they too have suggested at various forums. These activities include: garages, furniture shops, building materials and hardware, car sale yards, car wash, metal fabrication. The PAPs have been engaged in discussing the options available for relocation.

A further 177 properties will be affected by the road widening to dual carriage-way and may entail to be compulsorily acquired for the road improvement purpose. This is the total number of parcels that have title deeds including those that have encroached on the land reserved for the improvement. The property owners of land that is legitimately in their possession will be

compensated at the statutory rates (replacement costs and disturbance including loss of any business, if applicable) inclusive of any other relief applicable. These PAPs are within the 60m road reserve and the areas required mainly at road junctions for improvements. The details of the impacts to the project affected persons are shown in the table below.

Entitlement Matrix

Type of Impacts	Eligibility	Responsibility	Remarks
Land	Only parcels to be acquired from the legally registered leaseholders outside the 60m road reserve	KURA and National Land Commission	177 land parcels will be affected in total along the project roads. The total area amounts to 10.5 hectares of land. This includes parcels within the road reserve that bear survey numbers and purportedly registered. Of the parcels of land, 35 are developed with permanent buildings and are partially encroaching on the 60m road reserve.
Buildings/Boundary walls	Where partially acquired and/or the boundary walls affected as result of acquisition of vacant space	KURA and National Land Commission	Where the walls constitutes part of the legal property affected by acquisition for land.
Loss of Incomes and Livelihoods	Assistance to relocate from RoW to new sites.	PAPs, Nairobi City County and KURA.	275 temporary shelters built of wooden posts with iron sheets or polythene sheeting for walling and roof. 170 traders who spread their merchandise in the open. 445 Informal business persons will be affected by the displacement within the road reserve.
Places of Worship	All religious organizations with legitimate ownership to the space will get assistance to relocate from RoW to new sites.	KURA, Nairobi City County and National Land Commission	17 places of worship within the kiosks in temporary structures.

b) Loss of Access to Social Facilities

No public facility will be removed without compensation or suitable restitution. The local authority and other government agencies involved in management of land development will be involved in the identification of suitable land to accommodate the restitution of the public facilities thus removed.

The design of the project road incorporates foot bridges to facilitate safe crossing by the pedestrians from either side of the dualled road. The location of the foot bridges is aligned with neighbourhood planning and the pedestrian flow-lines to facilities on either side. During the meeting of the civil society on 21st March 2013, the issue of school children and their safety of accessing facilities were discussed. The same matter had been raised during the public consultations.

10. Income Restoration Program

The objective of income restoration activities is to ensure that no PAP shall be worse off than he or she was before the project. Restoration to pre-project levels of income is an important part of rehabilitating individuals, households and socio-economic and cultural systems in affected communities.

There are two types of Resettlement programs that aim at preventing impoverishment and restoring incomes and livelihoods of PAPs; land-based programs that provide resettlers with alternative land, and non-land based income generating activities such as small business, enterprise development, vocational training, employment, credit, etc., which will help the PAPs to restore any lost income opportunities, or improve their income generating capacity. For the PAPs within the Outer-Ring Road Corridor, the second resettlement program is most appropriate since the land they are occupying is not theirs and therefore they will not lose land but the businesses and structures they have on it.

The identified opportunity therefore is to ensure that the PAPs who get spaces in the formal markets benefit by use of the already available infrastructure. The following options shall also be employed as income restoration measures.

- Provision of vocational training;
- Encouraging and assisting the PAPs to form self-help groups;
- Creation of access to credit facilities; and
- Improvement of sites for carrying out business activities.

A comprehensive training of the PAPs shall be done to assist them in resettlement. The overall objective is to promote business development and growth, employment creation and poverty alleviation. The proposed training program is aimed at building their capacities through economic empowerment, self-development, and improved environmental management. It is hoped that the beneficiaries will acquire skills to enable them move on and relocate businesses elsewhere, open new businesses and enhance their management and businesses practices for the sustainable development of their enterprises.

11. Implementation Arrangements

The Ministry of Transport and Infrastructure through Kenya Urban Roads Authority (KURA) shall be the overall supervisor of the resettlement process. Arrangements shall be made where by KURA shall be responsible for the disbursement of funds to the PAPs through Resettlement Committee (RC). The RC shall consist 18 members as shown in the Table below.

Members of Resettlement Committee

S/No.	Organization	Appointing Office/Authority	Number of Appointees
1	Kenya Urban Roads Authority	Director General	5
2	Nairobi City County	City Engineer	1
		Director Social Services	1
		Director City Inspectorate	1
		Director City Planning	1
3	Administration	County Commissioner	1
4	Ministry of Lands, Housing and Urban Development	Director National Lands Commission	1
5	Community Based Organisation	Chief Officer of One Identified Organisation	1
6	Representatives of PAPs	A Committee of PAPs Organisations/Groups	6
TOTAL			18

NGOs with experience in social development and poverty alleviation programs and a verifiable track record should be included as partners in the resettlement plan implementation.

Selected NGOs should be engaged to support site-level resettlement plan implementation in coordination with RC personnel.

13. Implementation Process

Kenya Urban Roads Authority (KURA), Nairobi City County, Ministry of Lands, Housing and Urban Development shall through Resettlement Committee (RC), oversee the implementation of RAP. Among the responsibilities of the Committee are:

- To ensure that appropriate agencies that are mandated to plan and implement compensation, income restoration, and rehabilitation programs are identified as early as possible in Project preparation;
- To ensure compliance with the Resettlement Plan and Environmental Management plan; and
- To acquire the required land and pay compensation to the PAPs during the pre-construction period, and taking over the completed facilities for operation and maintenance during the post-construction period.

The following four components will form part of Implementation of RAP:

- Notification;
- Verification of properties of affected persons and estimation of their type and level of losses;
- Preparation of entitlement persons for Land Acquisition; and
- Relocation and resettlement of the PAPs.

14. RAP Implementation Activities and Schedule

Once the Resettlement Plan obtains approval from the government/funding body and implementation budget is secured, the implementation of RAP will proceed in the following sequence:

- KURA, Nairobi City County and Ministry of Lands, Housing and Urban Development shall establish a Resettlement Unit by constituting the members as prescribed in table 13;
- Training of the RC staff on Project-associated resettlement and rehabilitation responsibilities;
- Selection of NGOs working with the affected community;
- Grievance redress through grievance committee;
- Implementation of RAP - Disbursement of compensation, Income Restoration, Relocation, Resettlement activities;
- Demolition and Reconstruction of residential and business structures.

The time scale for the resettlement process is estimated to take fourteen (14) months. This takes into account important variables such as resolution of conflicts / grievance, and unforeseen circumstances.

RAP Implementation Schedule

	Calendar Year	2013						2014							
	Time in months	5	6	7	8	9	10	11	12	1	2	3	4	5	6
A	Schedule for Informal Sector														
1	Inventory Survey (Census) for PAPs	█	█	█	█										
2	Working Group / Task Team Set-up				█	█	█								
3	Securing Resettlement Sites					█	█	█	█						
4	Notice & Agreement with PAPs								█	█	█				
5	Implementation of Resettlements & Compensations											█	█	█	
6	Clearance of Road Reserve (Demolition & Levelling)											█	█	█	
7	Grievance Redress									█		█		█	
	Vocational Training for PAPs														█
8	Monitoring (Quarterly Report to KURA/GoK)				█			█		█		█			█
9	Additional Budget Allocations												█		
B	Schedule for Formal Sector														
1	Working Group / Task Team Set-up	█	█	█	█										
2	Road Reserve Confirmation Survey & Installation of Beacons				█	█	█								
3	Asset Inventory / Evaluation					█	█	█	█						
4	Notice & Agreement with PAPs								█	█	█				
5	Implementation of Compensations & Land Title Transfer											█	█	█	
6	Clearance of Road Reserve (Demolition & Levelling)											█	█	█	
	Grievance Redress									█		█		█	
7	Monitoring (Quarterly Report to KURA/GoK)				█			█		█		█			█
8	Additional Budget Allocations												█		

15. Grievance Redress Mechanism

In order to deal with the grievances that may arise during the implementation of RAP, there is need to incorporate a grievance redress process within the RC. The grievance redress process will be carried out by a sub-committee within RC which will hear the complaints and provide solutions, and reduce unnecessary litigation by resolving disputes through mediation.

The PAPs shall play a role in the committee through representatives headed by a Chairman elected by the PAPs who will carry out the following as regards redressing grievances:

- Hear the grievances of the PAPs and provide an early solution to those they are able to;
- Immediately bring any serious matters to the attention of the RC; and
- Inform the aggrieved parties about the progress of their grievances and the decisions of the RC.

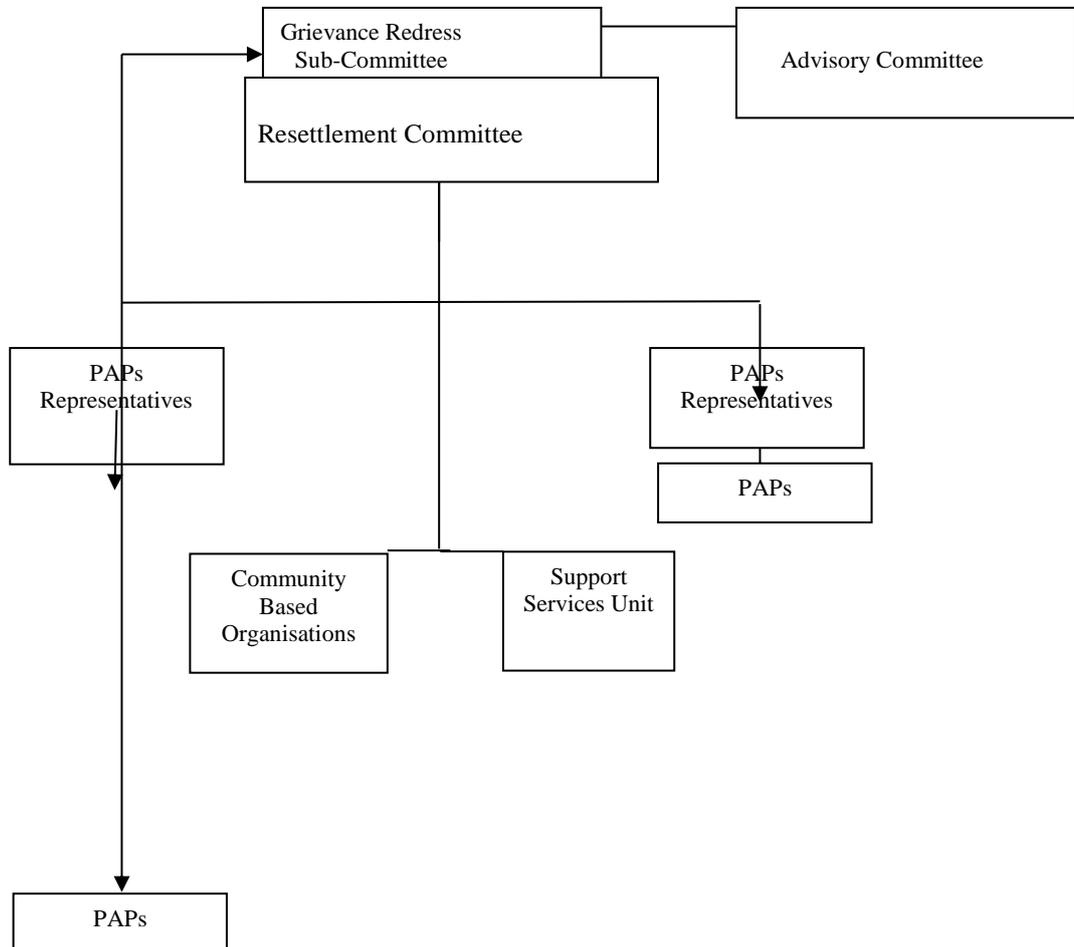
Grievance Redress Sub-Committee shall be formed within the RC. This shall address the following main issues:-

- Register the grievances raised by the PAPs; and

- Address the grievances forwarded by the RC/PAPs representatives.

Grievance Redress Sub-Committee shall try as much as possible to arrive at a compromise for complaints raised. This may be obtained through series of conciliation, mediation and negotiation exercises conducted with the PAPs. If PAPs accept the recommendations made by the committee, the committee along with PAPs representative in the committee will hold mediations meetings at the appointed places and time.

Grievance Redress Mechanism



16. Resettlement Budget

The total cost to mitigate the social impacts for the road sections is as shown below. The budget to mitigate the impacts and offer support for restoring livelihoods. The values indicated are estimates, the government valuer will ascertain the values and revise accordingly shortly before any definite compensation can be processed.

No	Compensation Item		Total Cost (Kshs)
1	Resettlement and compensations	Land	350,000,000
		Loss of Livelihoods and training	24,330,000
		Transport Allowances	4,236,000
		Relocation of utilities	340,000,000
		Disturbance allowances	54,400,000
		Assistance to Vulnerable groups	10,000,000
2	Monitoring and implementation	Resettlement Committee	6,000,000
		Advisory Committee	3,000,000
		Grievance Redress Sub-Committee	3,000,000
TOTAL			794,966,000

17. Monitoring and Evaluation

A Monitoring and Evaluation (M&E) program is required to be developed to provide feedback to Project management which will help keep the programs on schedule and successful. Monitoring provides both a working system for effective implementation of the RAP by the Project managers, and an information channel for the PAPs to assess how their needs are being met. Monitoring shall be conducted in two ways: by advisory committee and internally by RC.

An advisory committee will carry out monitoring and evaluation of RAP implementation. The committee shall begin the work right from the implementation of RAP and will meaningfully and realistically monitor and evaluate the resettlement programs on a periodic basis so that all the vital activities are successfully implemented. Monitoring and evaluation will be useful in formulation of corrective measures by identifying the problems and difficulties faced by the PAPs and bringing them to the notice of the RC.

The committee shall carry out the following:

- Verify results of internal monitoring by RC;
- Assess whether resettlement objectives have been met; specifically, whether livelihoods and living standards have been restored or enhanced;
- Assess the resettlement efficiency, effectiveness, impact and sustainability, drawing lessons for future resettlement activities and recommending corrections in the implementation process; and
- Ascertain whether the resettlement entitlements were appropriate to meeting the objectives and whether the objectives were suited to PAPs conditions.

The committee shall comprise of twelve (12) members formally appointed by respective organisation to serve for the full duration of fourteen (14) months as specified in the schedule or as may be revised in future.

18. Conclusions and Recommendations

This Resettlement and Action Plan will be implemented by compensating the individuals affected by the proposed road activities. The compensation and assistance allowances will enable the PAPs to relocate and pave way for the road construction. In compliance with both the national regulations and the AfDB policy and procedures, all PAPs will be resettled and compensated before the construction activities commence.