## Project: FISH TOWN – HARPER ROAD PAVING PROJECT
LOT I (50 Km Harper-Karloken Road Section)

## Country: LIBERIA

### Environmental and Social Impact Assessment & Resettlement Action Plan Summary

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ENVIROMENTAL AND SOCIAL IMPACT ASSESSMENT (ESIA)
SUMMARY

Project Name: Fish Town – Harper Road Paving Project LOT 1- Harper – Karloken Road Section Project
Country: Liberia
Project Number: P-LR-DB0-004

1. Introduction

The Government of Liberia (GOL) through the Ministry of Public Works (MoPW) is intending to secure funding from the African Development Bank (AfDB), for the upgrading of the 130Km road of the Fish Town to Harper City section of the proposed Zwedru-Harper Road Corridor. The study road lies within Maryland County. The Ministry of Public Works awarded the Consultancy Contract for the Feasibility Studies and Detailed Engineering Designs for Upgrading of Section 2 of the Ganta to Harper Road Corridor between Zwedru - Harper City (255 km) and Harper Junction - Cavalla Customs (16 km).

The Ganta to Harper Road Corridor Project is to be implemented in three Lots. LOT 1 is Harper City – Karloken Town Road Project which is the focus of the Environmental and Social Impact Assessment (ESIA) study and this ESIA summary; LOT 2 is Fish Town - Karloken Road Project and includes the Harper Junction to Cavalla Road Section and LOT 3 is the Fish Town – Zwerdu Road Section. LOT 1 Harper City – Karloken town road section covers a total length of approximately 50Km, and will involve re-alignments and construction of various other road components such as bridges, culverts, and development of ancillary works (material sites, camp & garages).

According to the regulatory requirements of the Environmental Protection and Management Law of Liberia (2002) the proposed road construction project falls within the activities that require a mandatory EIA, i.e. Building and Civil Engineering Industries. Likewise, according to AfDB’s policy & guideline, the project is classified under Category 1, and therefore requires the preparation of an ESIA as well as preparation of standalone ESMP. This ESIA Summary has been prepared from the project documents in accordance with AfDB’s Environmental and Social Assessment Procedures (ESAP). In addition, over 200 persons will be involuntarily displaced by the project. Since the ESIA is based on a detailed engineering, a full Resettlement Action Plan (RAP) has been prepared and is included as Annex 1.

2. Project Description and Justification

The existing laterite road is a two-lane highway located in the south western part of Liberia in Maryland County. The project road traverses through mostly rural areas. However, due to the heavy vegetation on either side of the road, the road is reduced to one lane on several segments of the corridor. All existing bridges and many of the cross drainage structures along the project road section are proposed to be replaced as the current substandard width and conditions are major road safety hazards. The existing concrete bridges are over 50 years old and the Bailey bridges were meant to be temporary.

The proposed Lot 1 Harper City – Karloken Town road section is designed to be a two-lane paved highway, each lane 3.65 m wide. The project road generally follows the existing horizontal alignment, with the exception of a few segments where curve flattening was introduced to provide the required design speed. Three major re-alignments are proposed at
Km 8+400- 8+889 (an area of 21,136 m²), Km 9+000-9+559 (38,056m²), Km19+200-KM19+800 (22,562m²). Minor alignment shifting will also occur at river crossings in order to maintain the existing bridges open while the new bridges are under construction. The Right of way is 45km (22.25 m each side from the centre line).

The work will generally consist of vegetation clearance and topsoil removal, earthworks and excavation of longitudinal ditches, construction of culverts, construction of four bridges, pavement construction, provision of erosion control measures, drainage improvement, safety improvements including reflectorized paved markers, sidewalks, curb, gutter through urban areas and other ancillary works. The urban road sections are proposed to have 0.60m shoulders adjacent to a new 1.80m sidewalk on either side, whereas rural sections will make use of a 2.40m shoulder. The project interventions will lead to involuntary displacement of some properties within the Right of Way, necessitating the development of a Resettlement Action Plan (Annex 1).

Notwithstanding, the functionality of current design, the intense wet climatic conditions in Liberia present major challenges in the maintenance of unpaved roads which often come with high life cycle costs. In the absence of a suitable maintenance funding framework, such as a Road Fund, Liberia would increasingly find it difficult to maintain unpaved roads that require consistent technical and cost attention. Paving of the Harper road to Karloken would ensure that the design of the road is robust, fully responsive to the terrain and climatic conditions and have low life-cycle costs.

The project would improve access to transport services for the rural population in Maryland County with the rest of the country; improve farm to market linkages as well as farm-gate prices, and uplift the quality of life of the people of the project area. The road corridor is situated in an area heavily endowed with mineral and agriculture resources such as rubber that could take the populace to greater socio-economic development and promote regional integration with neighbouring Ivory Coast.

3. Policy, Legal and Administrative Framework

The relevant policy and legislative framework was reviewed to make sure that the proposed project is in line with the available national policies and legislation. The Constitution of Liberia which was drafted in 1984 forms the basis of environmental law in Liberia, particularly Article 7 which provides for public participation of all citizens in the protection and management of the environment and natural resources in Liberia and places responsibilities on state organisations to ensure that this is met.

The most important policy documents include: the Constitution of Liberia, the National Environmental Policy, the National Transport Policy and Strategy (NTPS), National Policy for Reconstruction and Development, the National Gender Policy (NGP), the Gender and Development Act of 2001. The African Development Bank’s group Policy on the Environment (AfDB 2004), and related ESA Procedure (AfDB 2001) were also reviewed to identify policies that can be triggered by the project development & follow the funding procedure.

The National Environment Policy of Liberia mandates a comprehensive set of laws and legal framework to protect the environment through sustainable development and management. It also establishes the EPA and the institutional arrangements that support the Agency, to protect the environment. The EPA is an autonomous agency under the Presidency with a Policy Committee chaired by the minister for Lands Mines and Energy. The EPA has a key
responsibility for matters relating to the issuing of an environmental impact assessment license and for compliance monitoring relating to environmental regulations and standards.

4 Description of the Project Environment

The proposed project lies in Maryland County. Maryland County is located in the Southeast most corner of Liberia and borders the Atlantic Ocean to the South; the Cavalla River representing the international border with the Republic of Ivory Coast to the East; Grand Kru County on the West; and River Gee County to the Northwest. The project road directly traverses the two districts of Pleebo and Karloway in Maryland County. The sub-sections below describe the biophysical, social and cultural environment of the project area.

Bio-Physical Environment

Topography: The project area lies in a predominantly undeveloped watershed and traverse largely through forest and rubber plantations. The topography can best be described as undulating with few hilly sections. The catchment is covered with thick forest of equatorial type with high tree canopy except at the towns and villages along the corridor where there are virtually no grass-cover and several rubber tree plantations between Harper City and Karloken.

Climate: There are two seasons; the wet season from May to October and the dry season from November to April. Maryland experiences between 1700mm to 2500mm of rainfall annually. The mean monthly relative humidity varies between 70 and 90%. The mean daily bright sunshine hours varies in excess of 4.0 hours. The mean monthly temperatures of the project catchment vary from 24.5 and 27.5°C. The highest temperature recorded in the project area is 32°C and the minimum is 22°C. Wind speeds are generally light being of order of 6 knots.

Soil and geology: Liberia is perched on the West African Shield. The West African Shield that is made of granite, schist, and gneiss. The geology of the area between Harper city and Karloken is dominated by this shield which has been intensely folded and faulted and is interspersed with iron-bearing Formations known as itabirites. Along the coast lie beds of sandstone, with occasional crystalline-rock outcrops. In the eastern half of the country, lenses of Proterozoic greenstone belts occur surrounded by rocks of probable Archean age. Along the coast are un metamorphosed proteozoic to recent sediments. The soil type is generally silty reddish-brown with high content of clay which might result from the weathering of sedimentary rock. There are also few areas with lateritic gravel.

Water resource and drainage: Maryland County has large rivers: the Cavalla, located in the East, the Gee River, in the Northwest, River Nun in the West and Ni Dellor in the West. Cavalla River is the longest in Liberia and it is the shared between Liberia and Cote D’Ivoire serving as the border. The Gee River has several waterfalls, which flow and drain from the swamps and tributaries into the Ocean. One of the two major lakes in Liberia – Lake Shepherd is in Maryland County. The project road crosses major rivers and streams as well as small tributary creeks. The major rivers and streams are perennial whilst most of the tributary creeks are ephemeral. These ephemeral creeks often run completely dry during the dry season except some few localized depressions in the creek bed. Groundwater is available from a depth of 1m but most deep boreholes are 100m deep.

Important habitat flora and fauna: There are no protected areas like national parks, wildlife reserve etc traversed by the proposed road route. The Liberian mongoose, the giant forest hog, chimpanzees, red colobus (a long-tailed monkey), bongo antelope, leopard and the golden cat are amongst the animal population inhabiting Liberia’s forests. The forests are also home to
hundreds of birds; several dozens of reptiles, including crocodiles and poisonous snakes; amphibians and at least a thousand different insects. These are mainly located in Sarpo and Grebo Forest Reserves which are more than 40km from the project road.

The vegetation found covering the project area consists of primary and secondary forests and savannah. Most of the forests along the road are open, with only isolated huge trees such as Antaris, toxicaria, Pentaclethra macrophylla, Piptadenias-trum africanum, Sacogollotis. Terminaliasuperba and Triplochiton, scleroxclon, which give abundant forest re-growth. They are 260 species of trees including the Mahogany, African Walnut, Mahere, Teak, Ebony, Ironwood, Makore, Sikon and Camwood within the project area of influence. Shifting cultivation practices are also destroying the forests in the area.

The road runs through a range of luscious secondary forest and commercial rubber plantations. Commercial rubber plantations dominate the corridor from Karloken to Harper City. There were a total of 11 rubber plantations identified along the road and will not be affected by the ROW.

**Socio-Economic Environment**

**Demographic Characteristics:** The Harper-Karloken road traverses twelve (12) communities all within the two districts of Pleebo and Karloway in Maryland County. The communities are: Harper City, Weah Village, Barriken, Old lady Town, Sedeken, Pleebo City, Boniken Town, Tugbaken, Gbawanken, Manolu, Wutuken, Karloken. The main ethnic group within the project area of influence is Grebo, and it is estimated that about 98% of the project population are Christian, 1% Muslim and 1% Animist.

The population of Maryland County is estimated at 135,938 with male and female populations at 52% and 48% respectively. 50% of the population of Maryland County reside in the project districts of Pleebo and Karluway. Pleebo/Sodoken district has the highest population in the county of 43,233 (31.8%) while Karloway district has 25,653 (18.8%). The active population, youth between 15 to 40years makes about 44% of the population in the project communities. It also indicates how crucial it is for such an active population to become economically independent and hence the need for schemes that will enable the youth to become gainfully employed.

**Educational Attainment:** The County has 151 Schools (i.e. 118 public, 33 Private) with a student population of 29,823. 66.8% (29% of the County total) of the population 10 years and over along the route can read and write a simple sentence in any language. With respect school attendance in the communities along the route, 29.8% of the population had never been to school, 15% are drop outs, 9.4% completed grade 12 and 45.8% are currently in school. An estimated 41% of Maryland County’s population cannot read or write.

**Gender:** Despite progress made since the end of the civil war, women and girls continue to have limited access to education, health services and the formal economy in Liberian. With notable few exceptions including the Presidency, women have been missing out on opportunities and participation in management and decision- making positions at all levels of the society. Gender inequality and women’s marginalization in Liberia is maintained and sustained by traditional and religious perceptions of women as subordinate and men as superior. Girls and boys, women and men are socialized and culturally ascribed different and rigid roles, duties and responsibilities with regard to division of labor, access and control over resources and decision- making positions. In turn, these are transferred to schools, the community and the work places.
During the social survey carried out in the project area, respondents were asked about the situation of women and according to 37.5% of the respondents, women need attention and assistance; 18.3% indicated that women need empowerment, 15% were of the view that women find it difficult to get food, medication, clothing and social affiliation and 10.8% said that women need employment and financial support. A few people were also of the view that only few women are able to struggle for themselves; women have poor finances and lack economic opportunities and that this puts them at risk of begging and prostitution.

**Health:** Maryland County has 24 functional Health Facilities out of the 656 national totals. Malaria has been recorded as the leading cause of morbidity and mortality in Liberia. Maryland County reported 47,288 malaria cases out of which 19 was fatal in 2012. The reported malaria case represented 2.83% of the national case. 4.6% of the HIV positive cases purportedly came out of Maryland.

**Poverty:** During the social survey conducted for the project, respondents were asked about what percentage of the people in their community they would consider as poor. Majority (68.3%) were of the opinion that more than half of the population was poor. The opinion of the majority is borne out by the data on average monthly incomes for respondents themselves which showed that 61.6% lived on less than USD 2 per day. Participants in the focus group discussions suggested higher figures, 90-98% being the percentage of the poor.

Respondents were asked to suggest measures that can be put in place to reduce poverty in the area. Many (51.7%) of the respondents suggested that the provision of jobs by government and private individuals will help alleviate the situation. Others (26.7%) said the Government of Liberia (GOL) should provide subsidies to the poor, empower the citizens through training in vocational skills and projects such as road side maintenance and other programs.

**Economic activities:** Residents within the project road corridor are principally engaged in small-scale cash crop production and subsistence farming. Produce includes rice, cassava, corn, sweet potatoes (eddoes), plantain, palm produce, pulses and vegetables.

75% of the social survey respondents were self-employed, the rest were either employed by another (18.3%); students (1.7%) or were unemployed (5%). According to the survey conducted, farming was the dominant occupation for the people in the communities since half of the respondents were into farming as their major occupation. Other types of occupations recorded included trading (23.2%), formal work (14.3%), tradesmen (8%) and services (4.5%).

5. Project Alternatives

The road section which is proposed for upgrade is already in existence, what is expected is to improve the road from the current status. Two main project alternatives have therefore been considered: the No Project Development Option and the Engineering Intervention Option.

**The No Project Development Option:** This option will retard socio-economic development in the project regions. The No project alternative in the long term is considered expensive due to high life cycle maintenance cost. On the environmental score, the existing road maintenance would require earthworks and opening up of gravel sites during periodic maintenance. The combined effect of these problems affects the smooth transportation of people and goods to and from the areas in the road corridors. Speed travel on these roads will continue to be slow and vehicular breakdown rate will continue to increase. Some communities are usually cut off during the rainy season and will continue to suffer. Social and economic activities
within the communities will generally decline. With gender, the condition of women will continue to remain vulnerable as there will be fewer economic opportunities for them within the traditional conservative system. Socioeconomically, direct and indirect job creation and employment opportunities will continue to be limited and more so for the youth and women. Currently, apart from subsistence farming and petty trading employment choices are limited. Therefore the no-project option was evaluated but not considered as a feasible option.

**Engineering Intervention Option:** In considering the various alternative solutions to the present state of the roads, the project aim of opening up the South-eastern region of Liberia to increase productivity, reduce transportation costs for the agricultural target centres and improve critical social services has been considered. The Engineering Intervention Option will mean the upgrading of the road into a bituminous surface road. The selection of this option would provide the following benefits: (i) archaeological and cultural patrimony will grow and become dynamic as the area opens up and comes into contact with other cultures and good quality of life; (ii) A good road will stimulate the local economy as farmers will be able to sell surplus produce at better prices, petty traders will be able to expand their businesses as the purchasing power of other community members increase. This can lead to the creation of more direct and indirect employment as the local economy grows and becomes more diversified; (iii) The land required for the implementation of the project will be mainly linear except for the borrow pits and quarry sites, much of the land area required will be ribbon-like as it follows the existing road.

An estimated 339 households are likely to be affected in the various communities and the relocation and compensation costs have been estimated in the RAP report. The Engineering Intervention Option was selected as the preferred option (this project) on technical, economic, social and environmental feasibility. The description of the selected option is provided in Section 2 of this Summary.

6. Potential Impacts and Mitigation Measures

**Positive and Beneficial Impacts:**

**Regional Integration:** The proposed project will bring significant benefits to the regional and country economy following adequate, safe, cost effective and reliable transport service. A considerable reduction in vehicle operating costs is anticipated once the project has been implemented. The Harper - Karloken Road is an important link with the Border Post with Ivory Coast at Pebedo Border Crossing and Cavalla River Crossing, the Ganta – Harper Highway and is also an alternative link on the Trans-Coastal: Lagos – Nouakhchott Highway as identified by ECOWAS with the potential to facilitate Sub-regional Trade and Integration in the future.

**Reduction in Travel Time and Costs:** At the moment trade and communication between the counties in the proposed road corridor and also with Ivory Coast is constrained mainly due to the lack of standard transportation facilities and poor existing road conditions. The road project will facilitate an all-weather access along the corridor. This will create efficient inter-zonal and regional accessibility and significantly increase frequency of transportation vehicles on the road, reduce travel time, reduce vehicle operating costs and overall costs of transportation.

**Increased Agricultural Production and Reduced farm losses:** Agriculture, which is the mainstay of the economy in the project area, is expected to increase because of the project. During the construction phase, farmers will be encouraged by the additional influx of population and increased income levels to produce more in order to sell the surplus. Upon
completion, the existence of a good road will enhance access to market for farm produce, facilitate faster transportation of produce to markets and help increase the prices of farm produce.

**Employment Opportunities to locals:** The project construction is estimated to take about 24 months, hence significant benefit is expected from employment opportunities to local communities during this period. Direct employment is estimated to be significant primarily during construction, with approximately 158 skilled and 117 unskilled workers. The annual benefits are estimated to be US$ 440,000 – 470,000/year for two (2) years, (2014-2015). The youth and women residing in the project area will benefit from the employment opportunities created due to the road construction.

Proposed enhancement measures include: (i) employment of work force mainly from the locality where the construction work is on-going; (ii) employment of women and provision of training for women in the different skills; (iii) employment, wage system, and other administrative measures for the local workforce should be in line with the country’s law. Recommendations will be made in the Contract and Bidding Documents to the contractor to employ people from the local communities. The workers employed should be well remunerated, facilitated with personal protective equipment and treated well for them not to feel insecure about their jobs.

**Creation of income generating activities:** The project will increase non-agricultural employment opportunities for local communities. Businesses such as shops, catering services (or small bars and restaurants) located along the project road and near the construction camps are likely to spring up secondary to the construction activity as entrepreneurs seize the chance to meet the demands of people with increased incomes. Improvement in income levels will also lead to infrastructure development as people improve their dwellings.

**Improved Access to Social Services:** Once the road becomes operational, travelling along the route is going to be faster, safer, more comfortable and cheaper. Currently motorbikes are the dominant form of transportation, followed by taxis. A good road will attract mini buses and large buses to the route bringing down travel cost, improving safety and riding comfort. This will have a ripple effect on access to social services and amenities. In the case of health, people will be able to travel to higher level facilities for treatment; referrals can be transported more quickly and more lives will be saved, especially, maternity cases. Children who seek secondary and tertiary education in Pleebo and Harper will be able to access faster and more reliable transport. This is likely to increase enrolment and retention in schools.

**Negative Impacts:**

With respect to the effect of the current road conditions on the activities of people in the project area the project’s social survey and public consultations revealed respondents views on the ways in which the road condition affected their lives in a negative manner. About 13.4% of survey respondents said they were affected in the sense that goods are not received on time which causes them to go bad and 19.1% said vehicles break down frequently which slows down activities and causes deadlines to be missed, 12.1% of respondents indicated that food crops were damaged leading to high post-harvest loses. 11.5% mentioned lack of transport and high cost of transportation and 7.6% each said the current road condition hampers the progress of university instructors by making it difficult for them to report at post and the prices of goods are high due to the poor condition of the road.
The current condition was said to: cause frequent accidents by 2.5%; make travellers’ clothes dirty (4.5%); cause health problems such as respiratory infections and give poor access to health care (6.4%); cause traders to have fewer customers because there are not too many companies located in the area (0.6%) and cause people to walk long distances (0.6%). 3.2% of respondents indicated that the road condition is a main contributor to the low standard of living in the area and a major cause of rural urban migration leading to virtual depopulation (1.9%).

Some other significant adverse impacts and proposed mitigation measures are outlined below.

**Road Safety and Accident Prevention:** Road accidents are mainly associated with poor road conditions, lack of road signs, lack of awareness on road safety by users & pedestrian. The proposed project has been re-aligned in several sections to ensure traffic safety. Accidents can be minimized with implementation of proper traffic operation & regulation. During operation the project road traffic levels are likely to increase, and with high speed vehicles having potential risk of accident. Potential accident risk is expected to be high until road users adjust to the new conditions. For mitigation a Road Safety Campaign is proposed in the area. Furthermore, road safety signage and speed limit signs will be provided during construction and operation.

**Land Take and Resettlement:** The major direct adverse impact of the project is due to permanent land take for re-aligned sections and displacement of populations within the road Right of Way. Approximately 81,754m$^2$ of land will be taken by re-alignments. It is estimated that 339 Project Affected Households (PAHs) will be affected. A total of 331 structures of the PAHs have been identified of which 92 are commercial properties and 239 residential properties. The structures vary from structures made of concrete, mud, dub, zinc and bricks. The commercial structures are small shops and kiosks. In addition, 1,344 crop trees, mainly rubber trees that belong to 8 PAHs; 6 graves that would be affected belonging to 6 PAHs and some community facilities such as wells and hand pumps are expected to have to be relocated. The mitigation measures include implementation of the Resettlement Action Plan developed for the project. No construction should commence until all land and property expropriation procedures have been completed, replacement land allocated, and cash compensation paid.

**Impacts from Construction Camps:** Temporary construction yards and facilities for the Contractor and a permanent camp for the Supervision Engineers Offices and residential quarters will be established by the contractor, and will involve clearing of the vegetation, fencing of the yard and the offices/ houses, workshops, fuel storage, car washing, store-rooms vehicle parking areas, crusher site, asphalt mixing plant etc. Ablution and potable water shall be provided. These activities will give rise to negative impacts to the receiving environment if not well mitigated.

Mitigation measures include; (i) Camp location and design should not be on environmental sensitivity of sites like forested areas, but consider the future use of the facilities upon commissioning of the project. These considerations can assist safe and economical use of resources and can benefit the local administration and/or the surrounding community up on handing over of the camp facilities to the client. (ii) The continued use of the buildings and the camp facility after commissioning of the road will avoid demolishing and disposal problems that could result both in economic losses and environmental damages to the surrounding area. (iii) Consultation with the county and local administration shall be done to assist in identification of the appropriate camp site that can serve dual purposes.

**Impacts on quarries, borrow sites and associated roads:** Two rock quarries have been identified approximately 3km off the road within the county. Borrow areas for lateritic gravel
can be found in several locations along the road corridor, about 500m from the road. Existing access or new access roads have to be developed to quarry sites resulting in adverse impact to the existing land use which may include crop cultivation, grazing, vegetation. The impact is considered to be temporary however, the land is likely to suffer long-term reduction in productivity as a result of soil compaction by haulage vehicles. This cannot easily be reused using simple ploughing. Compensation paid by contractors for temporary loss of use of the land is unlikely to take this factor into account, and adverse financial effects on landholders are likely to result.

Mitigation measures include (i) The construction contracts should have a clause prescribing quarry sites and access roads as part of the site, so that the powers and authority of the Engineer extend to them in the same way as to other areas where works are being undertaken; (ii) The Project will re-evaluate to ensure that the design optimizes the net balance of cut and fill; (iii) EPA should certify that the locations of identified borrow pits and quarries are ideal and they are not likely to impact negatively to the neighbourhood; (iv) The contractor is required to submit the list of borrow pit areas to the consulting supervisor who then submits it to EPA for approval; (v) Written agreements should be developed and signed between the land owners and community leaders and the contractor; (vi) A detailed material plan should be prepared as part of the initial design review. Subsequent to this, quarries areas should be identified, marked on engineering drawings, and specified in the tender/contract document. Only approved quarry areas should be used. Quarrying for filling should only take place at designated sites, and existing quarries should be used where possible. (vii) The requirement to rehabilitate borrow and quarry areas, as well as access roads, should be included in the contract.

**Impact on soils:** Activities carried out during the construction phase will result in exposure of the top soil to erosion particularly in the areas with steep slopes and other areas along the road. Cut and fill operations may result in volumes of spoil being dumped on the road side or next to the water sources. Spoil earth materials have to be disposed properly to prevent siltation and sedimentation of streams and lakes around the construction sites.

The other impact on soil can result from compaction due to machinery and vehicular movements affecting crop fields and grasslands. Soil compaction results in poor productivity and poor vegetation growth, due to lack of air circulation and lowered infiltration of rain water. Impact on soil pollution can also occur due to leakage, inappropriate disposal of fuel, oils and other chemicals utilized by construction machineries & garage works. Mitigation measures include: (i) cover embankment sides with grass and ensure growth through watering; (ii) surplus excavated top soil shall be stored and used to rehabilitate degraded grounds; (iii) loosen compacted soils upon commissioning and vegetate with seedlings, as appropriate; (iv) Spoil soil should be timely collected and carted away to designated disposal sites. Spoil soil should not be disposed or accumulated at river banks, close to the streams, lakes reservoir, and at water ways and flood routes.

**Impact on Water Resources and Water Quality:** The direct effect on water resource in the project area is mainly associated with rivers and streams that are traversed by the road and where new crossing structures will be constructed. The project road construction related activities like excavation, generation of wastes, installation of embankments & crossing bridges, direct water abstraction for construction purpose may have effect on the available water resource. Rivers, ponds and groundwater are used for potable supply purposes throughout the project area for drinking and washing purposes.

The adverse impact on water quality of the rivers & lakes is related to increase of suspended sediment and risk of residual chemical contamination from bridge construction, earth work
and other construction activities. Oil products used for the machinery and vehicles during construction works and waste generated in camps and garages could also be sources of pollution to the water resources in the project influence area.

Mitigation measures include; (i) Construction of settling basins to remove silt, pollutants, and debris from road runoff water before it discharges into stream drainage; (ii) Construction of bridge & other major earthwork works around water sources should provide for soil erosion protection measures and scheduled during dry seasons to minimize the entry of soil material into the rivers by flooding and runoff water; (iii) Alternative water supply sources shall be provided for construction camp sites to avoid interference with local water supplies; (iv) Water quality deterioration caused by pollution from oil products and chemicals can be minimized with timely maintenance of leaking machinery parts and good housekeeping practices in garages, campsites and refuelling stations by the contractor; (v) Camps and garages, and associated sanitary facilities should be located away from sensitive ecological sites, ponds and floodplains and away from water sources and river crossings.

**Impact on Biodiversity and Vegetation Clearance:** The project doesn’t traverse important protected wildlife habitat area and therefore no major adverse impact anticipated on wildlife by the road project. However, thick vegetation exists along the entire corridor. Although the road will generally not deviate from its existing alignment with the exception of the three realignments, rehabilitation will lead to the removal of trees and vegetation on both sides as the right of way is expanded. Vegetation removal, noise and vibration from the construction works could frighten the wildlife in the vicinity and probably drive them from their habitat. Significant alterations to the flora, fauna and aquatic habitats will not be experienced unless the rivers are silted.

Liberia has the largest remaining portion of the Upper Guinean Forest and contains unique species of flora and fauna. However, deforestation and other human activities are affecting the integrity of the forests. It is estimated that approximately 480,000 acres (192,000 hectares) of forestland is lost annually due to logging, shifting cultivation and other activities. With the proposed road improvement, these activities are expected to rise along the route. The FDA, MOA and the MOT are expected to put mechanisms in place to curb these activities. The current PRS II requires improved monitoring to ensure reforestation is a key component of forest management. Logging activities are expected to increase along the corridor after road rehabilitation.

Mitigation measures include: (i) The Contractor shall observe the requirement of confining earthworks within the road reserve of 45 meters (22.5m either side of the road from the centre line) of works. The purpose is to minimise the potential impact of loss of vegetation (ii) The Contractor shall seek approval prior to felling trees and where trees are felled, these will be compensated by replanting at appropriate locations or compensation of the owners; (iii) Logging activities should be strictly monitored by the Forestry Development Authority at specific check-points along the corridor.

The Executing Agency, Ministry of Public Works shall ensure; (i) the project’s ESMP is passed on to the Contractor and the Supervising Consultant during bidding; (ii) the Contracts and bidding documents contain all required mitigation measures to be implemented during the construction period and obligation for the contractor to implement ESMP at construction period, (iii) Construction permit is obtained from MoPW prior to granting any civil works contract, (iv) monitoring ESMP implementation is undertaken on a regular basis as required, (v) semi-annual reports on ESMP implementation should be well documented and submitted routinely to EPA (v) coordination with other parties and government agencies to effectively
implement ESMP at all Project stages takes place, (v) remedial actions are undertaken for unpredicted environmental impacts,

To ensure that contractors comply with the provisions of the ESMP, the following specifications should be incorporated in all construction bidding procedures: (i) a set of environmental prequalification conditions for potential bidders, (ii) a list of environmental items budgeted by the bidders in their proposal, (iii) environmental evaluation factors for bid reviewers, (iv) environmental clauses for contract conditions and specifications, and (v) the ESIA and ESMP reports should be made available to potential bidders.

7. Environmental Hazard Management

For sound management of the project at both construction and operational phases, the following plans will be put in place to protect critical resources in the event of an accident. The plans and programmes include: (i) Construction Environmental and Social Management Plan (CESMP); (ii) Community Engagement Plan (CEP); and (iii) Project Emergency Response Plan (PERP).

The CESMP shall be prepared prior to the commencement of construction activities. The plan, which will be based on best practice, would provide a framework for managing all construction-related activities in and around the project site. The plan will provide construction management guidelines that define minimum standards of construction good practice as indicated in the mitigation measures. The guidelines will cover issues raised in the ESMP including: Site Access, Management of Water and Soil Resources, Workforce Health and Safety Management, Traffic Management, Waste Management, Management of Hazardous Substances, Fuels and Oils, Biodiversity, Dust and Air Pollution.

The CEP will involve coordination, communications and engagement activities with stakeholders, particularly the residents of the communities along the route. The Community Engagement Team will comprise the Consultant Engineer, the Contractor, a Representative from MPW and County Representative. The plan includes the community Grievance Redress Mechanism and alternative dispute resolution for the Project. The elements of the plan will provide a framework for the implementation of several mitigation measures.

The PERP will cover both phases of the project. The PERP will outline policies and procedures for managing emergencies during the Project. The four main areas of emergency response currently identified are: injury to/sickness of a person (student or worker); major incident (e.g. fire in base camps); environmental hazard (e.g. overspill of waste oils into waterways); and natural disaster management (e.g. bushfire).

The Forestry Development Authority, Ministry of Public Works as well as the Ministry of Transport and Ministry of Health will be responsible for management of both direct and indirect impacts occurring after the construction phase.

8. Monitoring Programme

The Environmental and Social Management Plan (ESMP) will serve as a guideline for incorporating mitigation measures to be carried out by the contractor. The ESMP needs to be updated into a CESMP at the beginning of implementation; therefore, detailed locations and frequency of monitoring can be defined in more practical ways. The primary responsibility of
environmental management during the project construction phase lies with the project construction contractor & supervision consultant.

For this purpose, both the Contractor and the supervision consultant shall each recruit an Environmentalist and Sociologist/RAP Specialist. The Contractor’s E&S specialist shall be responsible for development of the CESMP and daily implementation of the plans. The Consultant’s E&S Specialist shall be responsible for undertaking an independent supervision of the implementation of the CESMP and be actively engaged in integrating environmental supervision work with the overall project construction supervision activity.

Monitoring is a long-term process, which should begin at the start of construction and should continue throughout the life of the project (2 years). Its purpose is to establish benchmarks so that the nature and magnitude of anticipated environmental and social impacts can be continually assessed. It involves the continuous or periodic review of construction and maintenance activities to determine the effectiveness of recommended mitigation measures. Consequently, trends in environmental degradation or improvement can be established, and previously unforeseen impacts can be identified or pre-empted.

An overall supervision and monitoring of the environmental conditions and performances of the project will be made by the Environmental Protection Authority at both the national and county level to monitor the project performance against the conditions of the ESIA Certificate of Approval. External monitoring can be conducted with government financing institutions like the Ministry of Finance as well as the AfDB that will check the project performances against their funding policy & environmental guidelines. The Cost of ESMP implementation is estimated at USD 1,339,000.


Consultations were held with officials at various decentralized departments in Monrovia and Harper capitals. This included: the Ministry of Public Works (Head/ County Offices); Ministry of Health; Ministry of Planning and Economic Affairs; Office of the Superintendent – Maryland County; Liberia Institute of Statistics and Geo-Information Services; Forestry Development Agency; Flora and Flora International.

An extensive community consultation exercise was carried out within all villages, towns and cities along the road corridor during the month of March –June 2013 as part of project preparation. The process included both semi-structured interviews, with small groups and more formal consultation meetings. All of the roadside-affected and beneficiary communities are aware of the upcoming Project. The community gave unanimous support for the construction of the road. They believe that upgrading the road will help them join the country’s mainstream socioeconomic development. The community requested for timely and fair compensation to be paid to Project Affected Households.

The formal consultation meetings provided the following suggestions: (i) RoW should be reduce from 45 meters to 30 meters as much as possible in built up areas in towns; (ii) reduce “formation-width” of the road to its minimum possible in built-up areas, especially in commercial areas; (iii) provide sufficient cross drainage culverts to avoid flooding and ensure natural flow of water, (iv) provide job opportunities to the locals.

With regard to the environmental concerns, the consultation meetings recommend (i) native species of bushes/trees should be planted along the roads; (ii) excavation activities should be controlled, especially near populated areas; (iii) contractors must repair/reconstruct the
structures damaged by the road construction works/activities; (iv) sites used for labour camps and quarrying of construction materials should be rehabilitated and/or levelled; (v) spoiled dumps should be levelled so that adjacent community/farmers may use them for crops/tree planting; (vi) dust and noise pollution should be minimized during construction work; (vii) labour camps should not be established too close to local villages/towns; (viii) leftover construction materials must be disposed of before leaving.

These concerns have been addressed through the project design as well as through the ESMP. A Grievance Redress Mechanism and Procedure for the communities will be established through a local committee where questions or concerns on the project can be addressed by the Contractor or Supervising Engineer.

10. Complementary Initiatives

Complementary community initiatives are planned to enhance project benefits, improve socio-economic conditions of the local communities, and ensure project sustainability. The complementary interventions are proposed based on the general understanding of the road project area & constraints grasped during the ESIA study and consultations, and hence require further onsite assessment & consultation with concerned stakeholders.

Youth Involvement: The Acting president of William Vacanarat Shadrach Tubman University in Maryland requested that the civil engineering students from the University to be involved in the construction of the road to serve as training, knowledge transfer, vacation jobs and impart skills practically to be in a position to gain employment at the Ministry of Public Works. The Ministry shall engage with the Faculty of Civil Engineering and develop a plan to allow the Engineering students to learn during Design Review, Construction and Maintenance Phases of the project.

Gender Mainstreaming: 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. The project road being an agricultural area there are many women whose occupation is farming more especially during the rainy seasons demand a lot of garden work by women, which may impede their employment in road construction. Married women may benefit less from construction employment because their spouses may dictate whether they work on road project or not. This choice being solely a responsibility of an unmarried woman means that single women might benefit from road construction jobs more than their married counterparts. Mitigation actions are:

The Gender Plan of Action shall include: (i) Equal employment opportunity shall be available for women and men for road construction jobs; (ii) the contractor shall encourage women to apply for available jobs by indicating this in job adverts. Additionally Local council representatives working with the contractor on recruitment shall encourage women to apply for project jobs. The aim will be to have at least 30% of workers being female; (iii) To avoid severance of access to private property like homes, farmlands and grazing fields through high embankments or longitudinal drains, the contractor should provide temporary access routes, or foot slabs that can be safely used especially by women, children, disabled and elderly people; (iv) During road construction, women can be involved in a wide range of activities including traffic control, store keeping, security, painting, stone pitching, beautification/landscaping and sweeping; (v) The contractor shall enforce use of gender sensitive language such as: “Go Slow, Works In Progress instead of “Go Slow, Men at Work”. This, coupled
with women’s visibility in road works would, contribute to women’s empowerment as well as breaking the stereotype that road construction is a preserve of men; (vi) The Contractor shall also provide suitable sanitary ablution blocks for female workers, separate from the men. Portable toilet units could also be deployed at worksites.

**Road Safety Awareness Campaigns:** The project will include an item of road safety campaign and education programs for the road users during construction and operation. Such activities shall be performed during construction where most contractors tend to be either ignorant or negligent about road safety measures. During operation, educational campaigns will have to target all users. The service provider for this activity will have to collaborate with the MPW, and the Police.

**Malaria and HIV/AIDS/STI Awareness Campaign:** Malaria and HIV/Aids are the most prevalent health concerns of the population. The project has incorporated in its design awareness and prevention programs against the spread of HIV/AIDS and STI. The MoPW shall develop TORs for recruitment of Service Providers, and the bidding documents ensure that special clauses are included in the Contractor’s contract. To ensure sustainability of programs and activities, MoPW will impress it upon the service provider to engage the various networks at county levels. These include NGOs, CBOs, Ministry of Health, and others who will be expected to continue with the awareness and prevention activities.

**Tree Planting:** Tree planting should be encouraged and this will need to be integrated into the road project so that suitable areas in the catchment area are replanted with trees. This should serve to counter balance the loss of woody biomass and will in the long term restore the vital habitats for species dependent on trees or forested environments, as well as acting as a carbon sink and a balance for enhanced carbon emissions following maturity & full vegetative growth.

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

### 11. Conclusion

The goal of the road rehabilitation project is to enhance rural travel and transport activities improve access to social amenities such as hospitals and schools; improve farm to market linkages as well as farm-gate prices and uplift the quality of life of the people of Maryland County. The proposed project is in line with the policy of the GOL to link the county capitals with paved road. Any option that does not include paving of the corridor does not fall in line with the strategic policy of GOL.

The communities directly affected by the project were consulted and have given unanimous approval to the project as proposed. A range of negative construction related impacts were identified, but these may be considered as temporary or can be mitigated. Mitigation measures for all of these have been identified and are included in the Environmental Social Management Plan (ESMP). The expected social and economic benefits to the affected communities have been clearly identified and will compensate for the temporary negative impacts during construction.

The recommendations provided to ensure that the project is implemented in a sustainable manner include: (i) Update and implementation of the proposed environmental mitigation management & monitoring plan based on site specific conditions; (ii) inclusion of the necessary environmental clauses in the project tender & construction contract document so as
to ensure the implementation of the proposed mitigation measures; (iii) ensure independent environmental supervision through recruitment of Environmentalist and Sociologist/ RAP Specialist as part of the supervision consulting service for effective implementation of proposed mitigation management & monitoring measures; (iv) implement the RAP; (v) Strengthen the capacity of MPW to supervise implementation of ESMP during construction and to carry out routine inspections during the road construction period.

It is therefore recommended that project road should be upgraded to paved surface standard provided the ESMP is implemented.

References

Feasibility Studies and Detailed Engineering Designs for Upgrading a Section (Section 2) of the Ganta to Harper Road Corridor between Zwedru – Harper City (255 km) and Harper Junction – Cavalla Customs (16 km) Republic of Liberia Lot 1 - Fish Town and Harper City (130km), June 2013 by Stanley Consultants.


RESETTLEMENT ACTION PLAN SUMMARY

Project Name: Fish Town – Harper Road Paving Project
LOT 1- Harper – Karloken Road Section
Country: Liberia
Project Number: P-LR-DB0-004

1. BRIEF PROJECT DESCRIPTION AND CONTEXT

This Resettlement Action Plan (RAP) was prepared for the rehabilitation and pavement of the Harper to Karloken (around 50 km). This section of the road crosses 13 communities\(^1\) and 2 districts (Harper and Pleebo) all within Maryland County. The project builds on the recently gravel improvement of Fish Town-Harper Road (130Km), financed by the African Development Bank (AfDB). The paved road will not only make it adaptable to the adverse climatic conditions but also protect the current investment in addition to other socio-economic benefits associated with road improvement.

In order to meet statutory and international requirements, the right-of-way (RoW) used in this RAP for most of the road is 22.88 meters on each side of the road, starting from the center line of the road. For both sides (left and right) a total of 45.76 meters constitutes the RoW. At present, there exist structures, graves, public utilities and tree crops within RoW. Occupants of these structures and owners of these tree crops are expected to be compensated and resettled according to national legislation procedures and the AfDB’s *Involuntary Resettlement Policy* (2003).

This RAP was prepared by staff from the Ministry of Public Works (MPW) and its Infrastructure Implementation Unit (IIU). The team was composed of the Property Evaluator, Zoning Officer, Social Safeguards Officer, Environmental Officer, under the supervision of the Environmental Safeguard Officer.

2. SOCIOECONOMIC SURVEY OF AFFECTED PERSONS

2.1 Socioeconomic Survey Methodology and Approach

Questionnaires were used to obtain census and socio–economic information of the affected people. The objective of the survey was to establish the magnitude of the project impacts on the affected households as well as establish an inventory of assets likely to be impacted. To ensure concise response, pre–coded multiple–choice questions were used during the interviews.

\(^1\) Harper, Weah Village, Barriken, Old Lady Town, Gboloken, Sedeken, Pleebo City, Boniken, Tugbaken, Gbawaken, Manolu, Wutuken, Karloken
2.2 Key Results

Population and Household

339 Project Affected Households (PAHs) are expected to be affected by the project and have been surveyed. The total number of Project Affected Person Household Members is 1,172, out of whom 48% are women. The average number of persons per household or structure is 3.5.

Table 1: Distribution by gender

<table>
<thead>
<tr>
<th>Population by gender</th>
<th>Survey Report</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>613</td>
</tr>
<tr>
<td>Female</td>
<td>559</td>
</tr>
<tr>
<td>Total</td>
<td>1172</td>
</tr>
</tbody>
</table>

The majority of the heads of the Project Affected Household are males (83%) as compared to females (17%). This is shown in Table 4.2.

Vulnerable Persons

The survey indicates that that there are 61 vulnerable persons directly affected by the project. More information on them is provided below:

Table 2: Nature of vulnerability

<table>
<thead>
<tr>
<th>Nature of vulnerability</th>
<th>Number identified</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female-headed households</td>
<td>48</td>
</tr>
<tr>
<td>Disabled (blind)</td>
<td>1</td>
</tr>
<tr>
<td>Elderly (over 70)</td>
<td>12</td>
</tr>
<tr>
<td>TOTAL</td>
<td>61</td>
</tr>
</tbody>
</table>

Economic and Livelihood structure of Project Affected Persons (PAPs)

Farming is the primary source of revenue of over half of the PAPs. Most of PAPs are low income earners, with the majority earning less than LD$7,000.00 (US$ 94) per month. The table below shows the different sources of livelihood among PAPs.

Table 3: Source of Livelihood

<table>
<thead>
<tr>
<th>Livelihood of PAH</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Farming</td>
<td>52.1%</td>
</tr>
<tr>
<td>Petty trading &amp; General Merchandise</td>
<td>20.0%</td>
</tr>
<tr>
<td>Mining</td>
<td>13.8%</td>
</tr>
<tr>
<td>Civil &amp; Public servants</td>
<td>7.4%</td>
</tr>
<tr>
<td>Students</td>
<td>4.9%</td>
</tr>
</tbody>
</table>
3. KEY IMPACTS AND LOSSES OF ASSETS

3.1 Overall findings

A survey of affected assets was conducted in May 2013. The findings show a total of 339 Project Affected Households (PAH), representing 1172 Project Affected Persons (PAPs). The survey indicates that 48% of PAPs are females and 61 defined as a vulnerable.

The figures above do not take into account the recently proposed realignments nor the plots affected of which PAPs claim to have land titles and expect financial compensations (See Section 5). A RAP addendum will be prepared shortly to assess potential losses from realignments and loss of land and be submitted to the AfDB.

3.2 PAH Affected Assets

Road rehabilitation and pavement typically affects land, houses, tree crops and other public structures. In the context of this project, the affected assets are the following:

**Affected structures:** A total of 331 structures have been identified, 92 commercial and 239 residential. The structures vary from structures made of concrete, mud, dub, zinc and bricks. The commercial structures are small shops and kiosks.

**Affected land:** Most of the project area is held under customary land ownership and shifting cultivation is the main method of farming, where farmers use a plot for two farming seasons, after which they leave it to occupy a new plot allocated by the chief. During the field visit, most of the PAPs used the land under customary ownership but some have claimed to have land title deeds although it has not been possible to date to verify that information. The total size of their plots is estimated at 100 acres. It was thus agreed that another survey would be conducted to verify these claims and its results included in the RAP addendum. Land deeds are difficult to verify in Liberia given that most of the archives have been destroyed during the civil war.

**Crop trees:** The key crop trees in the project area are rubber trees. The survey has identified 1,344 crop trees that belong to 8 PAHs.

**Graves:** The census has identified 6 graves that would be affected belonging to 6 PAH. The graves would be relocated according to the wishes of the family (the graves are included in the general census for structures).

*Table 4: Summary PAH Affected Assets*

<table>
<thead>
<tr>
<th># asset affected</th>
<th># PAH affected</th>
</tr>
</thead>
<tbody>
<tr>
<td>Structures (including 6 graves)</td>
<td>331</td>
</tr>
<tr>
<td>Tree/crops</td>
<td>1,344</td>
</tr>
<tr>
<td>Land</td>
<td>100 acres</td>
</tr>
<tr>
<td><strong>Total PAH</strong></td>
<td></td>
</tr>
</tbody>
</table>
3.3 Public Infrastructure Affected

Social infrastructure will be affected by the project. 3 public schools and 4 mosques and churches and some wells and hand pumps are expected to have to be relocated. Unfortunately, it was not possible to gather data on the student population for the schools or the number of religious affiliates.

Table 5: Social Infrastructure Affected

<table>
<thead>
<tr>
<th>Social infrastructure</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public utilities</td>
<td>6 (2 light poles, 4 hand pumps/wells)</td>
</tr>
<tr>
<td>Schools</td>
<td>3</td>
</tr>
<tr>
<td>Church/Mosque</td>
<td>4</td>
</tr>
</tbody>
</table>

4 ELIGIBILITY CRITERIA

4.1 General Eligibility

Project affected person eligible for compensation would be anyone whose property falls within the right-of-way designated for the construction and pavement of the Karloken-Harper Highway (50Km). More specifically, eligible PAPs can be adequately are as follows:

- Persons who have a right in structures (owners of buildings and tree crops), regardless of their legal status concerning the affected properties
- Persons who use the structures or persons whose businesses, occupation or habitat are adversely affected; or
- Persons whose standards of living are adversely affected as a consequence of resettlement activities.
- Persons whose property has been assessed by the census prior to the cut-off-date of May 9, 2013.

4.2 Eligibility for RAP addendum

For the RAP addendum, eligible PAP is anyone whose property falls within the right-of-way of the proposed realignments as well as the PAPs who can demonstrate land title over the entire road section. No cut-off-date has been set for the addendum yet.

4.3 Eligibility for Vulnerability Allowance

Vulnerable people have been earmarked for vulnerability assistance, in addition to other payments during relocation. Vulnerable people who will be considered under this project are the following:

Table 6: Vulnerability criteria

<table>
<thead>
<tr>
<th>Nature of vulnerability</th>
<th>Rationale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female-headed households</td>
<td>Women usually need some physical assistance in rebuilding their own structure and in move. Male family members may help or these female-headed household pay for labor costs</td>
</tr>
<tr>
<td>Disabled (blind)</td>
<td>Require assistance from others to relocate</td>
</tr>
<tr>
<td>Elderly (over 70)</td>
<td>Require assistance from others to relocate</td>
</tr>
</tbody>
</table>
5. VALUATION METHODOLOGY

Compensations have been made in line with the provisions of the African Development Bank Policy on involuntary resettlement, which requires that PAPs be assisted to improve their standards of living or at least for the latter to be restored to their pre-displacement levels.

5.1 Overall Approach

Valuation of the affected properties was made by the MPW Surveyor and Zoning Officers, based on the fee matrix set by the Real Estate Division of the Ministry of Finance (for structures) and the Ministry of Agriculture (for crops and trees). These figures are then reviewed considering current price index by the Internal Monitoring Unit, responsible for reviewing and validating the survey data (See Section 8 on implementation arrangements), before proceeding with payments. From consultations with the PAPs, the preferred form of compensation is cash (see Section 6 on consultations).

5.2 Valuation of Structures

Valuation of the structures was based on the Administrative Regulation (No.7.2000-1/MOF/R/17 September 2009) issued by the Real Estate Division of the Ministry of Finance (see Appendix 3). The Technical Appraisal Rate (TAR) is based on a fee matrix (USD unit/square meter) that varies according to the quality of the structure materials. Below is a table summarizing the average rates used for this RAP:

<table>
<thead>
<tr>
<th>Structure material</th>
<th>Price range (USD/square foot)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mud, wood, grass</td>
<td>5-10</td>
</tr>
<tr>
<td>Zinc, wood, plastic, laterite</td>
<td>10-15</td>
</tr>
<tr>
<td>Concrete</td>
<td>20-35</td>
</tr>
</tbody>
</table>

Six (6) graves are included in the census for structures. The valuation of the graves follows the same TAR.

5.3 Compensation for Land

It is estimated that around 100 acres will be affected. The market price for land in the area is US$200/acre and an allocation of US$20,000 has been provided in the RAP budget to cover potential loss. PAPs whose occupation of the land is conducted under customary rights will be reallocated a plot of land by the community chief as customary land. PAPs claiming to have a title deed will receive a financial compensation. Title deeds will be verified through the Ministry of Land, Mines and Energy and other relevant governmental agency to ascertain land ownership. So far, none of the PAPs who claimed to have a title deed have been able to produce it. This information will be verified during the follow-up census conducted as part of the RAP addendum.

5.4 Compensation for Tree-crops

The rates for tree-crops are set by the Ministry of Agriculture according to the following rates:
### Table 8: Rates for Crops and Trees

<table>
<thead>
<tr>
<th>Tree crops</th>
<th>Price/Mature/Tree 1</th>
<th>Price/Mature/Tree 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rubber</td>
<td>$6.00</td>
<td>$3.00</td>
</tr>
<tr>
<td>Cocoa</td>
<td>$6.00</td>
<td>$3.00</td>
</tr>
<tr>
<td>Coffee</td>
<td>$6.00</td>
<td>$3.00</td>
</tr>
<tr>
<td>Citrus</td>
<td>$6.00</td>
<td>$3.00</td>
</tr>
<tr>
<td>Coconut</td>
<td>$6.00</td>
<td>$3.00</td>
</tr>
<tr>
<td>Kola</td>
<td>$6.00</td>
<td>$3.00</td>
</tr>
<tr>
<td>Avocado</td>
<td>$6.00</td>
<td>$3.00</td>
</tr>
<tr>
<td>Breadfruit</td>
<td>$6.00</td>
<td>$3.00</td>
</tr>
<tr>
<td>Oil Palm</td>
<td>$6.00</td>
<td>$3.00</td>
</tr>
<tr>
<td>Plaintain</td>
<td>$3.00</td>
<td>$1.50</td>
</tr>
<tr>
<td>Pineapple</td>
<td>$2.00</td>
<td>$1.00</td>
</tr>
<tr>
<td>Sugar Cane</td>
<td>$120.00/acre</td>
<td>$60.00/acre</td>
</tr>
<tr>
<td>Cassava</td>
<td>$80.00/acre</td>
<td>$40.00/acre</td>
</tr>
</tbody>
</table>

#### 5.5 Compensation for loss of income for business

The project will affect 92 businesses, most of which partially. The RAP will provide the equivalent of one month average income for income restoration, which is the equivalent of 300 USD (estimated at around USD 10/day for 30 days).

#### 5.6 Relocation assistance

The RAP will provide financial assistance for the relocation of all structures (both commercial and residential). A USD 100 lump sum will be given to the structure owner for relocation expenses.

#### 5.7 Rental assistance for loss of residence

Families losing a residence will be provided with a USD 100 lump sum to provide financial assistance to cover rent expenses for up to a year (an average of 8$/month rent) while relocating or reconstructing a home to a new location.

#### 5.8 Special Assistance for Vulnerable People

PAPs defined as vulnerable will receive an additional US$125 to cover for special assistance and labor costs for moving and constructing a new home to help them build a higher standard of living or restore their normal life before the project activities commenced.

#### 5.9 Compensation and Entitlement Matrix

### Table 9: Entitlement Matrix

<table>
<thead>
<tr>
<th>Category of PAPs</th>
<th>Entitlement / Type of Loss</th>
<th>Compensation for loss of asset</th>
<th>Assistance for relocation</th>
<th>Other Assistance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Owner of structure</td>
<td>Loss of structure Residential</td>
<td>Financial compensation varies</td>
<td>USD 100 lump sum</td>
<td>USD 100 rent allocation</td>
</tr>
<tr>
<td></td>
<td>Loss of structure Commercial</td>
<td>Financial compensation varies</td>
<td>USD 100 lump sum</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td>Loss of Graves</td>
<td>Financial compensation varies</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>
### 6. COMMUNITY PARTICIPATION AND CONSULTATIONS

#### 6.1 Consultation objectives

Consultations were held with a wide range of stakeholders. Their objectives were:
- Dissemination of information among potentially affected communities about the intended project;
- Getting the perception of communities towards the project;
- Identification of anticipated project impacts on the socio-economic and cultural life of the community; and
- Identification of stakeholders and their roles in project activities
- Community perception about impacts of the project.

#### 6.2 Key Stakeholders

Series of consultations were held with stakeholders in the towns and communities affected by the project. Individuals, groups, organizations, and institutions interested in and potentially affected by the project were also engaged in a stakeholders’ forum where issues relating to the project impacts were discussed. Key stakeholders identified in the community include:
- county leaders;
- community leaders;
- households heads;
- business owners; and
- structure owners (Males & Females)
- owner of tree crops
- owner of graves
- women’s/ vulnerable people
- businesses owners

#### 6.3 Cut-Off Date

In addition to one-on-one meetings with government officials, a meeting was held in each community with the population at large. During the meeting, representatives from the MPW
provided detailed information on the project and its impacts, eligibility for compensation, the survey process to be conducted and the cut-off-date May 9, 2013.

6.4 Key Concerns Expressed

Residents in the area were generally receptive of the road construction. However, the following concerns were expressed. These concerns have been taken into account in the RAP design.

Table 10: Key concerns raised by PAPs

<table>
<thead>
<tr>
<th>Key concerns raised</th>
<th>How concerns will be taken into account</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loss of homes and livelihood</td>
<td>Compensation measures will be put in place to ensure conditions of PAPs are restored or improved</td>
</tr>
<tr>
<td>Doubts about receiving adequate or any compensation, thus being made worse off than they were before the project.</td>
<td>Consultations will take place during project implementation to reassure PAPs and an independent NGO will monitor RAP implementation</td>
</tr>
<tr>
<td>Inadequate notice from the authorities in charge of relocation</td>
<td>According to the survey, most PAPs requested a 2 month notice to vacate, which will be given to them.</td>
</tr>
<tr>
<td>PAPs indicated a preference towards cash compensations</td>
<td>Compensations will be made in cash (but for land held under customary right, which will be reallocated by town chief)</td>
</tr>
</tbody>
</table>

6.5 Future Consultations Plan

The Project proponent will be responsible to undertake a comprehensive and formal negotiation process with the PAPs and other stakeholders to determine mutually agreed compensation policies, procedures and rates. The negotiations process should be complemented by series of consultations and disclosures activities, the negotiation will be concluded prior to the finalization of report. The activities will involve formal and informal dialogue with stakeholders and relevant agencies on implementation process.

6.6 Disclosure of RAP Document

The Resettlement Action Plan (RAP) Harper to Karloken (50Km) Highway will be disclosed in Liberia by the Ministry of Public Works/IIU. Summary of the RAP will be hosted in the affected areas. Copies will also be disclosed at the Administrative Buildings in Fish Town, River Gee County and Harper City, Maryland County respectively and made available at the EPA, the IIU, and offices of the contractor.

7. LEGAL FRAMEWORK

The RAP takes into account applicable existing institutional and regulatory frameworks within the context of Liberian Law. Preparation of this RAP draws on the requirements of the African Development Bank Involuntary Resettlement Policy (2003) and Environmental and Social Assessment Procedures. The project is classified as Category 1. The RAP also draws on the Liberian Constitution of 1986, the Aborigine Law of 1956, Property Law of 1976 and Revised Rules and Regulations Governing the Hinterland of Liberia (2001), all of which provide the national framework for resettlement and compensation.
8. IMPLEMENTATION ARRANGEMENTS

8.1 RAP Implementation

The RAP implementation will be led by the Ministry of Public Works/ Infrastructure Implementation Unit and involve other institutions responsible for resettlement programs. These institutions will include (1) The Ministry of Lands, Mines & Energy (MLME) (2) the Environmental Protection Agency (EPA); (3) The Liberia Repatriation Resettlement Reintegration Commission (LRRRC); (4) The General Auditing Commission (GAC); (5) the Ministry of Finance (6) the Ministry of Internal Affairs and (7) an NGO recruited to monitor and evaluate the RAP implementation.

8.2 Internal Review, Monitoring & Evaluation

First phase – Preparation of RAP Addendum: The team responsible for the elaboration of the RAP (compose of MoPW and IIU staff) will conduct a field survey to prepare the RAP addendum designed to (i) provide more clarity on compensation for land and (ii) identify affected assets and their owners that will result from the realignments.

Second Phase - Verification and Validation Process by the Internal Monitoring Committee: The second phase of the RAP implementation will be the internal review process to be conducted by the IIU and the Internal Monitoring Committee (IMC) to ensure that all those listed on the compensation listing are qualified and certified. The RAP budget will be finalized following these findings and it is only after this process that payments will be made to the PAPs. A two-month notice will be given to the PAPs to vacate once payments have been made.

Third Phase – External Monitoring by an NGO: An NGO will be contracted to conduct the external monitoring and evaluation stage to strengthen consistency and follow-up of the whole RAP implementation process. The NGOs will work in an advisory role for the implementation committee and report regularly. Continuous evaluation is necessary for the identification of problems and difficulties occurring after the process of implementation.

8.3 Monitoring

Internal review, monitoring and evaluation will pay special attention to vulnerable groups, such as the aged and female-headed families. Baseline data from socio-economic survey and census of the PAPs will be used as the control data measuring improvements or deterioration of the PAPs relocation, after displacement. Monitoring will focus on:

- Information about PAPs post compensation and entitlement spending;
- Relevance of relocation RAP implementation timetable to what actually took place moving out of the project site.
- Content of grievances, efficiency of procedures and accountability in handling the grievance; and
- Use of compensation money for those who “invested” it in profit-making enterprises.

Indicators will measure inputs, outputs, and outcome relative to the resettlement activities. The indicators shall include:

- Number and categories of affected people compensated;
- Adherence to schedules for compensation as stated in the summary Table of the RAP.
- Resolved cases of complaints and grievances by the Grievance Committee.
8.4 Reporting

The NGO will be responsible for submitting independent monitoring reports to MPW/IIU and the Implementing Committee; and final report to follow at the end of the resettlement process.

9. GRIEVANCE REDRESS MECHANISM

9.1 Process description:

Owners of structures and tree crops whose properties are affected by the project would receive adequate compensation for their properties. Each individual PAP has the right to refuse the compensation rate proposed, if he/she finds the compensation to be inadequate and unfair under replacement cost. In the event of disagreement, the affected party may first seek recourse through the Grievance Redress Committee set up for that purpose to implement the RAP (see below).

The PAP is allowed to engage his/her own valuer to determine the compensation due. The valuer and the Grievance Committee together with the relevant valuation will negotiate a settlement. If the PAP is still not convinced with what has been proposed, as stated above, he/she can take the case to the court for redress. However, in the situation where the affected person is still not satisfied with the amount of compensation payable to him, he is at liberty to seek redress at the courts. However, the property cannot be demolished until the issue is resolved.

9.2 Grievance Redress Committee:

A Grievance Redress Committee will be put in place to facilitate negotiations between aggrieved PAPs and the MPW. Members of the Committee will include representatives from the PAP community, MPW, IIU, EPA, LRRRC and the MLM&E.

9.3 Procedures

The following steps are followed in sequence by the aggrieved or complainant (PAPs) to submit their grievances to the Grievance Redress Committee to amicably resolve their grievances a specified time frame:

Step 1: Grievances/Complaints are submitted either in writing or orally to a RAP Grievance/Complaint Committee by the Project Affected Person (PAP). The Grievance Redress Committee members are comprised of an inter-ministerial/Agencies and NGOs as well as members of the PAPs that they have nominated on the Committee to ensure that their grievances are addressed transparently.

Step 2: Grievance/Complaints Committee is given a maximum of two (2) weeks to come up with the resolution of the grievance/complaint.

Step 3: Grievance/Complaint Committee through its Chairman Communicate the finding or resolution of the grievance to the concerns PAPs and the Ministry of Public Works.
**Step 4:** If the PAP is not satisfied with the decision of the Grievance/Complaints Committee, he/she can take the grievance or complaint to a court of Law in the Republic of Liberia.

**Step 5:** The replacement value or cost that is being contested is placed in an escrow account until the court renders judgment on the Complaints/grievance.

10. **COSTS AND BUDGET**

The estimated budget for this RAP is US$1,168,856. Implementation of this RAP will be financed by the Government of Liberia, through MPW/IIU. Compensation will be paid directly to the affected parties by the Implementing Committee.

*Table 11: Estimated RAP Budget*

<table>
<thead>
<tr>
<th>No</th>
<th>Items/Activities</th>
<th>No. Unit</th>
<th>Ave. Unit Cost (US$)</th>
<th>Total Cost (US$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Compensation for affected structures</td>
<td>331</td>
<td>-</td>
<td>996,394.00</td>
</tr>
<tr>
<td>2.</td>
<td>Relocation allowance for all affected structure</td>
<td>331</td>
<td>100.00</td>
<td>33,100.00</td>
</tr>
<tr>
<td>3.</td>
<td>Rental allowance for affected residences</td>
<td>239</td>
<td>100.00</td>
<td>23,900.00</td>
</tr>
<tr>
<td>3.</td>
<td>Compensation for loss income (businesses)</td>
<td>92</td>
<td>300.00</td>
<td>27,600</td>
</tr>
<tr>
<td>4.</td>
<td>Compensation for affected tree crops</td>
<td>1344</td>
<td>6.00</td>
<td>8,064.00</td>
</tr>
<tr>
<td>5.</td>
<td>Compensation for public utilities</td>
<td>4</td>
<td>100.00</td>
<td>400.00</td>
</tr>
<tr>
<td>6</td>
<td>Farm Land Acquisition</td>
<td>100 acres</td>
<td>200.00</td>
<td>200.00</td>
</tr>
<tr>
<td>7</td>
<td>Relocation Assistance to vulnerable persons</td>
<td>61</td>
<td>125.00</td>
<td>7,625.00</td>
</tr>
<tr>
<td>8.</td>
<td>RAP Implementation &amp; Monitoring</td>
<td>-</td>
<td>-</td>
<td>18,500.00</td>
</tr>
<tr>
<td>9.</td>
<td>Demolition</td>
<td>-</td>
<td>-</td>
<td>15,000.00</td>
</tr>
<tr>
<td>10.</td>
<td>Sub-Total for Phase I &amp; II</td>
<td></td>
<td></td>
<td>1,151,583.00</td>
</tr>
<tr>
<td>11.</td>
<td>Contingency (1.5%)</td>
<td></td>
<td></td>
<td>17,273.00</td>
</tr>
<tr>
<td>12.</td>
<td>Grand Total</td>
<td></td>
<td></td>
<td>1,168,856.00</td>
</tr>
</tbody>
</table>
11. IMPLEMENTATION SCHEDULE

The estimated schedule for the RAP implementation is indicated below.

<table>
<thead>
<tr>
<th>N0</th>
<th>RAP Activity</th>
<th>Responsible Agency (Institution)</th>
<th>Target</th>
<th>Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>RAP preparation</td>
<td>IIU/MPW</td>
<td>June 2013</td>
<td>June 3, 2013</td>
</tr>
<tr>
<td>2</td>
<td>RAP Approval</td>
<td>AfDB</td>
<td>July 2013</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>RAP Addendum survey</td>
<td>IIU/MPW</td>
<td>July 2013</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Stakeholders meetings</td>
<td>IIU/MPW</td>
<td>August, 2013</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Detailed Asset Survey and Compensation IMU</td>
<td>IMU</td>
<td>August 2013</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>RAP Disclosure</td>
<td>IIU/MPW</td>
<td>August 2013</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>RAP Budget Approval</td>
<td>IIU/MPW</td>
<td>August 2013</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Grievances/Complaints Redress</td>
<td>IIU/MPW</td>
<td>September 2013</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>RAP Compensation Payment</td>
<td>IIU/MPW</td>
<td>October 2013</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Relocation of Project Affected Persons (PAPs)</td>
<td>IIU/MPW</td>
<td>December 2013</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Completion of Relocation of PAPs</td>
<td>IIU/MPW</td>
<td>February 2014</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>RAP Implementation Completion Report</td>
<td>IIU/MPW</td>
<td>February 2014</td>
<td></td>
</tr>
</tbody>
</table>

12. CONCLUSION

The MPW has committed to provide the Bank with the addendum that includes (i) the verification of land claims; (ii) the identification of assets expected to be affected by the proposed realignments. This will be requested as a condition of first disbursements along with payments.