

Audit Service Sierra Leone

PERFORMANCE AUDIT
REPORT ON THE
REHABILITATION
AND MAINTENANCE
OF RURAL FEEDER
ROADS-SLRA

May, 2014

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ABBREVIATIONS/ACRONYMS

ASSL Audit Service Sierra Leone

ASREP Agricultural Sector Rehabilitation Project

GoSL Government of Sierra Leone

INTOSAI International Organization of Supreme Audit Institutions

MAFFS Ministry of Agriculture, Forestry and Food Security

MDA's Ministries, Departments and Agencies

MoFED Ministry of Finance and Economic Development

MWHI Ministry of Works, Housing and Infrastructure

NRA National Revenue Authority

NRFRC National Rural Feeder Roads Committee

RCPRP Rehabilitation and Community-Based Poverty Reduction Project

RMFA Road Maintenance Fund Administration

RPSDP Rural and Private Sector Development Project

SAI Supreme Audit Institution

SLRA Sierra Leone Roads Authority

SLRTA Sierra Leone Road Transport Authority

GLOSSARY OF TERMS

Authority	Means the Sierra Leone Roads Authority.
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Road Includes a public way or strip of land opened to the public for purposes

of travel as a matter of right and over which abutting property owners have the right of light, air and access, streets, right-of way, bridges, railway-highway crossings, tunnels, drainage structures, traffic signs, guard-

rails, and protective structures connected with public ways.

classified road Rehabilitation.

Maintenance In the case of roads means the preservation of roads including surface,

shoulders, roadsides, structures and such traffic signs as are necessary for

the safe and efficient utilization of roads.

Rehabilitation In the case of roads means the process of bringing the road to its previ-

ous state or condition after construction. Its activities include construc-

tion of culverts, bridges, re- gravelling ditching and camber formation.

Road Fund Means tax revenue dedicated to the payment of expenses incurred by the

Authority in the routine, periodic and emergency maintenance of roads.

Road user charges
Include fees levied by the Authority for the use of roads, bridges and

ferries.

Contract Is the agreement between the Employer and the contractor to execute,

complete and maintain the Works.

Works Are what the contract requires the contractor to construct, install and

turn over to the Employer, as defined in the contract data.

Bridge This is any structure carrying vehicular or pedestrian traffic across a riv-

er, stream, valley, ravine, road, railway crossing, ditch and drainage struc-

ture.

Culvert A Culvert is a drain or pipe that allows water to flow under a road, rail-

road, trail, or similar obstruction.

Headwall In civil engineering, a headwall is a small retaining wall placed at the out

let of a storm water pipe or culvert.

Wing wall A short section of wall used to guide a stream into an opening, such as at

a culvert or bridge.

Inlet and Outlet Control equations form the basis for culvert design. To determine the

headwater, both inlet and outlet control equations are used, and the higher result governs. Inlet control will govern in supercritical flow, and

outlet control will govern in subcritical flow.

Re-grading Re-grading is the process of raising and/or lowering the levels of land;

such a project can also be referred to as a re-grade.

Stumping The part of a tree trunk left protruding from the ground after the tree

has fallen or has been felled.

Camber The slope of the road surface downwards away from the centre of the

road, so that surface water can flow freely to the edge of the carriageway, or on bends angling of the surface to lean traffic 'into the bend' reducing

the chance of a skid.

Laterite A reddish claylike material, hard when dry, forming topsoil.

Gravel Are small stones or fragments of stone; very small pebbles, often inter-

mixed with particles of sand. To gravel means to apply a layer of gravel

to the surface of a road.

Compaction Normally, compaction is the result of heavy machinery compressing the

soil, but it can also occur due to the passage of (e.g.) animal feet.

Pothole Is a type of disruption in the surface of a roadway where a portion of the

road material has broken away, leaving a hole.

Silt Fine sand, clay, or other material carried by running water and deposited

as sediment, especially in a channel or harbour.

Side drain A channel at the side of a road to drain water.

FOREWORD

The Audit Service Sierra Leone (ASSL) is the Supreme Audit Institution (SAI), constitutionally mandated to undertake external audit of all Public institutions in Sierra Leone. The scope of external audit has been expanded to include Performance Auditing, introduced by the ASSL in Sierra Leone in 2009. .

In submitting this Performance Audit Report for tabling, I refer to the constitution of Sierra Leone in which Section 119 (2) states "The public accounts of Sierra Leone and of all public offices including the courts, the accounts of the central and local government administrations, of the Universities and public institutions of like nature, any statutory corporation, company or the body or organization established by an Act of Parliament or statutory instrument or otherwise set up partly or wholly out of Public Funds, shall be audited and reported on by or on behalf of the Auditor General, and for that purpose the Auditor-General, or any person authorised or appointed in that behalf by the Auditor-General shall have access to all books, records, returns and other documents relating or relevant to those accounts".

I further refer to the Government Budgeting and Accountability Act of 2005, Section 63 (1) Sub section (1e), which states "In his examination of the Final accounts the Auditor-General shall ascertain that in his opinion, financial business has been carried out with due regard to economy in relation to results achieved", and; Sub section 66 (4) further states that "Nothing in this section shall prevent the Auditor-General from submitting a special report for tabling in Parliament on matters that should not await disclosure in the annual report".

In line with my mandate as described above, we have undertaken this Performance Audit on the Rehabilitation and Maintenance of Feeder Roads. This report highlights the key role of SLRA and other key stakeholders in the Rehabilitation and Maintenance of Feeder Roads. This audit also points out significant findings, conclusions and recommendations for ensuring an improved feeder road network in the country.

Lara Taylor-Pearce (Mrs.) FCCA, FCA (SL)

Auditor General of Sierra Leone

EXECUTIVE SUMMARY

Audit Service Sierra Leone (ASSL) has undertaken a Performance Audit on the Rehabilitation and Maintenance of Rural Feeder Roads carried out by the Sierra Leone Roads Authority (SLRA) and other key stakeholders for the period 2010 to 2012.

The audit was conducted in accordance with International Standards of Supreme Audit Institutions (ISSAI) and the African Organisation of Supreme Audit Institution-English (AFROSAI-E) Performance Audit Manual. The audit team sought to address the following questions:

- Are rural feeder road projects completed on time in line with specifications?
- To what extent do stakeholders comply with the National Rural Feeder Road Policy?
- How effective is the maintenance of rural feeder roads by Local Councils?

As a means of answering the above questions, the team held interviews with key stakeholders, reviewed relevant documents and undertook physical observation of project sites.

The audit covered SLRA's headquarters and its regional offices. It included the following feeder road projects under the Ministry of Agriculture, Forestry and Food Security (MAFFS), and five District Councils:

- Rural and Private Sector Development Project (RPSDP);
- Agricultural Sector Rehabilitation Project (ASREP); and
- Rehabilitation and Community-Based Poverty Reduction Project (RCPRP).

The National Rural Feeder Roads Committee (NRFRC) and the Road Maintenance Fund Administration (RMFA) being key stakeholders were also considered. The audit team visited sample rural feeder roads that were rehabilitated by SLRA and the various projects under MAFFS.

During the audit, the following findings, conclusions and recommendations were made by the audit team:

FINDINGS

The National Rural Feeder Roads Policy stipulates that rehabilitation works including but not limited to earth works, construction of culverts, bridges and pavement works should not be carried out during the months of June, July and August. However the team noted that contracts including clearing works, earth works and side drains were awarded to be executed during the rainy season, this amounted to Le195,332,547.48 for SLRA contracts and Le1,834,118,527.33 for RPSDP contracts.

Despite the fact that payments should be made to Contractors based on measured works and certificates of completion, the auditors noted a contravention in which payments amounting to Le1,759,724, 003.00 were still made to Contractors in respect of road works not completed.

During site inspection of the road, it was observed that unacceptable materials like logs were used to backfill constructed culverts instead of suitable laterite materials. Referenced to the First Interim Payment certificate, a total of Le180,907, 000 was paid to the contractor in January, 2013.

It was noted with concern that an all-inclusive standard for the construction of concrete structures like pipe culverts, single and twin box culverts and bridges have not been developed by SLRA for the implementation of all feeder road projects in the country.

Detailed examination of records produced revealed that road works were not carried out in accordance with the technical specifications and drawings, as stated in the contract agreement. Notably, some constructed pipe and box culverts were without offshoot, wing walls and poorly plastered.

SLRA did not provide any evidence of a national feeder road inventory and road condition survey for the planning, development and management of the feeder road network in the country. Furthermore, existing structures like culverts and bridges in poor conditions were not considered by SLRA during the rehabilitation of feeder roads.

It was discovered that there is limited collaboration and coordination amongst stakeholders on feeder road works. For example feeder road works were undertaken by donors and development partners without the involvement of the District Councils and SLRA District Engineers.

The local communities were not actively involved in the planning and monitoring of feeder road works in their localities-the description or specification of work to be done by Contractors was not made known to the community actors.

In the case of ongoing projects, the team observed that safety measures and axle load control for feeder roads were not implemented. For instance, traffic signs were not erected and potentially hazardous sections of feeder roads not protected using traffic calming devices.

SLRA have not enacted appropriate traffic laws that specify the maximum axle and overall loads for rural feeder roads in the country.

The audited financial statement of RMFA recorded 20% of the operating income, which amounted to Le9,443,706,686 billion Leones for 2010-2012. This amount was meant for maintenance of rehabilitated feeder roads. Even though there were available funds, maintenance of these roads was not carried out by the District Councils because the said amount was not provided by RMFA for the period under review.

CONCLUSIONS

During the conduct of the audit, the auditors noted generally that the stakeholders were aware of the policies and regulations on the rehabilitation and maintenance of feeder roads. Nevertheless, there are issues of non compliance and there was no value for money in the implementation of feeder road works.

Execution of key aspects of feeder roads during rainy season has contributed to the damage of road works undertaken for example; soil erosion resulting in poor quality of work done.

The fact that the Contractors were paid for incomplete work which was certified by SLRA is an indication that SLRA does not efficiently supervise and monitor feeder road works.

Road works have not been carried out as specified in the contract documents and the contractors have failed to adhere to contract specifications and drawings, for example, the use of logs to back fill culverts.

The absence of an updated National Feeder Road Inventory and Road Condition Survey has made it difficult to determine the current length and conditions of feeder roads and has also resulted in poor planning of feeder road works in the country.

The huge sum of money spent on rehabilitation and failure to undertake routine or periodic maintenance indicates that resources are not utilised in an economic and efficient manner. A lot of money would have been saved if the roads were maintained.

RECOMMENDATIONS

SLRA and other development partners that are engaged in the implementation of feeder road projects should take into consideration the construction/rehabilitation and maintenance calendar as required by the NRFRP before the award of contracts.

SLRA together with the Project Coordinating Units of the various projects should ensure that contracts are completed within the required completion dates. They should also conduct physical inspection of project sites before preparing measured work certificates and making payments to Contractors. SLRA should ensure that all incomplete contracts are either completed by Contractors or they make a refund of amounts expended for incomplete work.

SLRA should improve on their level of supervision and monitoring during the rehabilitation of feeder roads. They should develop an all-inclusive technical standard for the rehabilitation and maintenance of feeder roads in the country.

SLRA in collaboration with other stakeholders should conduct road condition surveys and develop an updated National Road Inventory periodically. Furthermore, SLRA in collaboration with the Local Councils should ensure that the local communities actively participate in the planning and monitoring of feeder road works in their localities.

In addition, SLRA should take into consideration existing structures such as, culverts and bridges that are in a poor state when undertaking a road condition survey for inclusion in the contract agreements. This will enhance the sustainability of feeder roads.

It is highly recommended that the NRFRC ensures that all activities relating to the implementation of rural feeder roads are effectively coordinated and harmonised to facilitate the free flow of information and reduce potential conflict of interest amongst stakeholders. SLRA should provide the necessary technical guidance and support to Local Councils to ensure efficient management of feeder roads.

SLRA should ensure that traffic management measures are implemented by contractors during road works. SLRA should implement axle load control on heavy vehicles to avert the damage to culverts and bridges.

In order for SLRA to effectively manage the feeder road network in the country, they should collaborate with Local Councils and provide them with the necessary technical support and guidance in undertaking maintenance works.

1. INTRODUCTION

1.1 PURPOSE

The Government of Sierra Leone's (GoSL) Poverty Reduction Strategy Paper (PRSP) called the 2008 – 2012 Agenda for Change' emphasises the need for the development of a national transportation network focusing on the Construction, Rehabilitation and Maintenance of the road network in Sierra Leone.

According to PRSP1, Road transport accounts for the majority of freight and passenger movement in Sierra Leone. Poor rural roads and the lack of regular transport services for personal travel and evacuation of agricultural products still pose serious problems. The country faces two major gaps in rural transport development. The first is the existence of inadequate and poorly maintained rural feeder roads connecting villages and farming areas to market centres. The second gap is the poor and unreliable rural services caused by lack of intermediate means of transport and appropriate infrastructure for use, leaving the carrying of goods almost entirely to commuters, mostly women.

This is also supported by the National Rural Feeder Roads Policy (NRFRP) of May, 2011 which states that more than 50% of feeder roads are in poor condition and only appropriately 20% are in good condition.

Feeder roads are particularly important because they provide communities the opportunities to break free of isolation from markets. The opening up of rural areas could potentially increased their incomes by enabling them two-way access both to sell their agricultural produce, and at the same time allow much needed inputs at lower cost at the rural level. Additionally, accessible feeder roads also contribute to the economic development of the communities by creating valuable job opportunities during their construction, rehabilitation and maintenance through the use of labour-based technologies.

SLRA together with development partners in the country considered the need for certain aspects of the road network to be taken care of by its auxiliary partners and in particular the various projects under the Ministry of Agriculture Forestry and Food Security (MAFFS) as follows:

- Rural and Private Sector Development Project (RPSDP)
- Agricultural Sector Rehabilitation Project (ASREP)
- Rehabilitation and Community Based Poverty Reduction Project (RCPRP)

The feeder road sector in the country therefore attracts continued investment of public and particularly donor funds and resources, all aimed at providing affordable means of transportation for even the deprived but productive communities. An amount of Le59,403, 677, 555.20

(billions) has been spent on the rehabilitation of feeder roads by development partners.

It is against this backdrop that an independent assessment on the Rehabilitation and Maintenance of Feeder Roads was undertaken by the Audit Service Sierra Leone on the SLRA. The audit was geared towards ascertaining the challenges affecting the feeder road network and suggests recommendations, which will assist in improving the condition of feeder roads in the country.

1.2 SCOPE

The client for this audit is SLRA focusing on the Rehabilitation and Maintenance of Feeder Roads for the period 1st January 2010 to 31st December 2012. The audit covered SLRA head-quarters and its regional offices, the respective projects funded by development partners under MAFFS and five District Councils. Other key stakeholders like the National Rural Feeder Roads Committee (NRFRC) and the Road Maintenance Fund Administration (RMFA) were also considered. The audit team also visited selected rural feeder roads that were rehabilitated by SLRA and development partners. Refer to Appendix 1 for the list of geographical areas and feeder roads visited during the course of the audit. Data collection took place from 10th December, 2012 to 30th April, 2013.

1.3 METHODOLOGY

The audit was conducted in accordance with the International Standards of Supreme Audit Institutions (ISSAI) and the Performance Audit Guidelines. In order to achieve our audit objectives, the audit team adopted the following methods for the collection of data.

Documents review

Documents listed below were reviewed in order to obtain relevant information on the regulatory and structural frameworks as well as the role of SLRA in planning, coordinating, supervising and implementing feeder road works. The documents also served as a basis of establishing the criteria for measuring the performance of SLRA.

- The Sierra Leone Roads Authority Act No. 2 of 1992
- The Sierra Leone Roads Authority (Amendment) Act No. 4 of 2010
- The Road Maintenance Fund Administration Act No. 3 of 2010
- The Local Government Act No. 1 of 2004
- Statutory Instrument No. 13 of 2004
- The National Rural Feeder Roads Policy of May 2011
- The Public Procurement Act No. 14 of 2004
- Contract Agreements of SLRA, RPSDP, ASREP and RCPRP
- Certificate of Payments
- A List of Contractors
- Financial Statements and Budgets of SLRA, RPSDP, ASREP and RCPRP from 2010-2012.
- A List of Feeder Roads Devolved to District Councils

Interviews

The audit team conducted a total of forty four (44) interviews including key personnel of SLRA and other stakeholders at central, district and community levels. Information from the interviews were used to complement and facilitate our understanding of the documents reviewed,

seek clarification on issues observed and the manner in which the rehabilitation and maintenance of feeder roads is planned and implemented as listed in Appendix 2. Our interviews also included acquiring knowledge on the practical involvement of the community people in planning and implementation of feeder road works.

Physical observation

A total number of twenty (20) rehabilitated feeder roads including completed and ongoing projects undertaken by SLRA and development partners as in Appendix 1 were physically observed to assess the state of the roads as at the time of our visit.

Contacts with the client

Contact persons appointed by SLRA and MAFFS were informed about the progress of the audit and assisted the auditors in retrieving information and contacting interviewees as and when required.

2. REHABILITATION AND MAINTENANCE OF FEEDER ROADS

2.1 REGULATORY FRAMEWORK

The Sierra Leone Roads Authority (SLRA) is a parastatal established by an Act of Parliament in 1992 under the auspices of the Ministry of Works, Housing and Infrastructure (MWHI).

The rehabilitation and maintenance of rural feeder roads in the country is regulated by the Sierra Leone Roads Authority Act, No. 2 of 1992, the Sierra Leone Roads Authority (Amendment) Act, No. 4 of 2010, the Local Government Act, No. 14 of 2004, the Local Government (Assumption of Functions) Regulations, No. 13 of 2004, the Road Maintenance Fund Administration Act, No.3 of 2010 and the National Rural Feeder Road Policy of May, 2011.

Section 5 (1) of Sierra Leone Roads Authority (Amendment) Act, No. 4 of 2010, states, "The object for which the Authority is established is the control, development, maintenance, efficient planning and reliable management of the national road network to provide safe, reliable and sustainable means of transport".

Section 11 (2) of the Sierra Leone Roads Authority Act, No. 2 of 1992 also states, "The Authority may, with the approval of the Minister, by order in the Gazette delegate to any local authority of or any competent body or person the control, maintenance and protection of any road or ferry or part thereof ...".

According to the Third Schedule of the Local Government Act No. 14 of 2004 on functions devolved to Local Councils, SLRA should devolve:

- Maintenance of primary feeder roads, and
- Maintenance of chiefdom roads/tracks

The Statutory Instrument No. 13 on the Local Government (Assumption of Functions) Regulations of 2004 states the main functions and activities to be devolved by SLRA and the year of

Table No.2.1					
Main functions	Activities to devolve	Year of assumption of function by Local Councils			
Maintenance of pri- mary feeder roads and chiefdom roads/ tracks	a. brushing b. grubbing c. ditch clearing d. reshaping of carriageways e. pothole patching f. cleaning of culverts g. day works	2005			

assumption of functions by Local Councils as in table 1.

Table2.1: Main functions and activities to devolve by SLRA

A Road Fund was created by the Government of Sierra Leone to cover the maintenance and rehabilitation costs of primary and secondary roads. According to section 9(2)(d) of the Road Maintenance Fund Administration (RMFA) Act, No.3 of 2010, the RMFA should "approve any application from any local council or body for funding from the Fund, of any road-related activity."

2.2 MISSION AND VALUES OF SLRA

2.2.1 Mission

To provide a safe, reliable and sustainable national road system for the enhancement of the socio-economic development of the country.

2.2.2 Values

In all we do we seek to be:

- sensitive to public opinion
- alert to ensuring value for money
- mindful of our strategic vision as contained in our mission statement

As an organisation we will demonstrate:

- accountability to road users
- · professionalism in the execution of our duties
- commitment to national development

2.3 BRIEF DESCRIPTION OF THE FEEDER ROAD NETWORK IN SIERRA LEONE

The transport system in Sierra Leone includes 11,300 km of classified roads of which approximately 4,152 km are feeder roads. Class F, Feeder Roads, provide basic means of communication serving several villages or small towns or connecting minor centres of population to a higher class road. They are classified as either gravel or earth roads and carry a maximum of 100 vehicles per day (vpd). The gravel roads carry 20 to 100 vpd, while earth roads carry less than 20 vpd.

2.4 THE NATIONAL RURAL FEEDER ROADS POLICY

A NRFRP was developed in May 2011 to ensure a consistent and unified approach to the planning, development, improvement and maintenance of rural feeder roads nationwide.

2.4.1 Vision

The NRFRP will ensure proper coordination and monitoring in the development of rural feeder roads, such that every person living in rural Sierra Leone, and women in particular, will have a year-round all weather access to basic needs, economic and social facilities, services and opportunities.

2.4.2 Goal

The major goal of the NRFRP is to efficiently develop and manage sustainable rural feeder road infrastructure and services. More specifically, the policy will help to develop and manage rural access in an efficient manner to ensure:

- Optimal economic returns on investment;
- Provide all-weather access to rural communities;
- Connectivity to higher order class of roads infrastructure;
- Benefit to society; and
- The use of labour based technology where appropriate in construction, rehabilitation and maintenance works. Rural access will be sustainable in economic, social and environmental terms.

2.4.3 General objectives of rural feeder roads

The following are the general objectives of the NRFRP:

- Developing a sustainable rural and feeder road network that is maintained at national standards using the most economic approach.
- Contributing to rapid economic growth and structural transformation through facilitating
 access to rural areas, and enabling all sectors to contribute to the goals of the Agenda for
 Change.
- Fostering good governance and security through the involvement of stakeholders/ communities in policy formulation and program development, as well as to improve road safety.
- Reducing rural poverty by increasing the capacity of the rural poor to expand their livelihood opportunities through increased access to markets and better prices for their produce.
- Creating employment opportunities by using labour based technology where appropriate, for the construction, rehabilitation and maintenance of rural feeder roads.
- Reducing transportation costs and cost of commodities.

Specific objectives of rural feeder roads

The specific objectives of this policy are to:

- Provide policy direction and minimum standards for construction and rehabilitation of feeder roads in Sierra Leone.
- Present an institutional framework for the construction and maintenance of all weather roads.
- Assure adequate and effective road sector management capacity taking into account envi-

ronmental and social impact.

- Encourage and promote private sector participation and
- Provide financing arrangement for rural feeder roads.

2.5 PROCESS OF FEEDER ROADS REHABILITATION AND MAINTENANCE

The NRFRP describes the procurement process for feeder road works.

2.5.1 Procurement

According to the NRFRP, a successful implementation of the services and works of the rural feeder roads find its root in the involvement of all major stakeholders in a transparent and fair procurement system. This system starts with:

- 1. The tendering of works and services;
- 2. The identification and selection of consultants (to design and or supervise the works); and
- 3. The identification and selection of contractors to execute the works (by maintaining, rehabilitating or constructing).

In the identification of consultants and contractors, the SLRA, MDA and Local Council should be involved at all times.

In the tendering for works and services the SLRA, MDA, Local Council and consultants (works only) should be involved at all times.

All works will be certified by SLRA and the relevant Local Councils before payment.

The National Public Procurement Authority (NPPA) procurement procedure should be apply in the case of all local funds and donor procurement rules and regulations, if donor funds are used.

2.5.2 Sierra Leone Roads Authority (SLRA)

The process of rehabilitation of rural feeder roads by SLRA is as follows:

SLRA and GoSL negotiate with donors for financing rehabilitation of feeder roads projects. SLRA identifies feeder roads for rehabilitation together with Councils and the line Ministry, in this case, MAFFS taking cognisance of the connectivity and gaps in the rehabilitation.

The Feeder Roads Department and the regional staff of SLRA should carry out a road condition survey. The result of the survey is then used to prepare Bill of Quantities (BOQs) and Line Diagrams.

The Procurement Unit of SLRA should commence the procurement process taking into consideration NPPA's standard bidding procedures. The road work should be advertised for bidders to purchase the bidding documents, and a pre-bidding meeting conducted to explain to the Contractors the expected road condition before completing the bid documents. The Evaluation Committee evaluate the bidding documents and recommends the most responsive bidder. The method of procurement will varies from one project to another depending on the financing agency.

A Performance Bond of 10% of the contract sum from a financial institution should be submitted by the Contractor before signing the contract. An advance payment of 20% to 30% should be paid to the Contractor upon submission of an Advance Payment Guarantee which is equivalent to the advance payment

The project site should be handed over to the Contractor in the presence of representatives of Council, the Project, SLRA and the communities. The Contractor should start work with the supervision of SLRA's regional staff on a day to day visit. The Feeder Roads Department periodically monitors the progress of work.

A monthly measurement of work should be jointly carried out by the Contractor and SLRA's Supervisor. An Interim Payment Certificate should be prepared for the payment of work done.

The certificate should be cross checked by the Feeder Road Department and forwarded to the funding agency for direct payment into the Contractor's account.

At the end of the project, a joint inspection should be undertaken by the Director of Feeder Roads or his Deputy, representative of the funding agency and Councils in order to determine if the work is completed according to specification. If there is any deviation from the specification, the Contractor will be directed to make amendment on the areas affected. On the other hand, if the work is of an acceptable quality, the defect liability period as stated in the contract will commence, in which all identified defects should be corrected by the Contractor.

After the defect liability period, another inspection should be undertaken. If the work is satisfactory, the retention fee should be released to the Contractor. If the work is not satisfactory, the retention fee should be used to pay another Contractor to correct the default. A Completion Certificate will then be issued to the Contractor by SLRA after the completion of the contract; the road should be handed over to the District Councils by SLRA for routine maintenance.

The process of rehabilitation for projects varies across projects depending on the funding requirement as detailed at Appendix 3.

2.5.3 Process of maintenance of feeder roads

The process of maintenance of rural feeder roads by the Local Councils is as follows: After a swift handing over of the road by SLRA for maintenance, the District Councils should select the feeder roads in their localities for maintenance.

An Annual Maintenance Budget/Cost Estimates and Work Program for the maintenance of feeder roads should be prepared by the District Councils in collaboration with SLRA District Engineers. These documents should be submitted by the Councils to NRFRC for approval (with copies sent to SLRA).

After approval, the documents are sent to RMFA for funding. RMFA should allocate 20% of the Road Fund meant for the maintenance of feeder roads to the District Councils. The

District Councils should carry out the necessary procurement procedures for the award of contracts in collaboration with SLRA. After the award of the contract, the maintenance work will commence under the supervision of the Civil Works Engineer of the Council.

2.6 ROLES AND RESPONSIBILITIES OF KEY STAKEHOLDERS

Table No. 2.2						
Details	Yea	Grand Total				
Details	2010	2011	LE'000			
Road user charge levied on fuel	49,166,932	29,592,780				
Funds from vehicle registration and	5,096,405	4,586,993				
Total income	54,263,337	34,179,773	88,443,110			

The roles and responsibilities of key stakeholders involved in the rehabilitation and maintenance of feeder roads are detailed in Appendix 4.

2.7 FUNDING

A Road Fund was initially established by GoSL to cover the maintenance and rehabilitation costs of primary and secondary roads. The Road Fund is financed from fuel levies, with minor contributions from vehicle registration and driving licenses fees.

Table No. 2.3				
Operating income	Amount (LE)			
Sierra Leone Roads Authority (SLRTA)	3,814,776,281			
Fuel levy	43,403,757,150			
Total operating income	47,218,533,431			

SLRA has been in charge of the Road Fund since 1992. A total of

Le88,443,110,000 (billion) was collected and paid into the Road Fund for 2010-2011 as detailed in the table below.

Table 2.2 Gross receipts by SLRA for the year 1st January 2010 to June 2011

Source: SLRA 2010 to 2011 Financial Statements

RMFA was established in 2010 for the proper, efficient, economic and sustainable management and administration of the Fund. According to the NRFRP, twenty percent (20%) of the Road Fund revenue should be dedicated to the maintenance of rural feeder roads. A total of Le 47, 218,533,431 (billion) was collected by RMFA. See table below.

Table 2.3 RMFA operating income for the 18 months ended 31st December 2012.

Table No. 2.4						
Name of project	Sources of funding	Details	Amount (Leones)			
RPSDP	World Bank	Rehabilitation of feeder roads (1st Phase of the project)	32,246,846,032.90			
ASREP	African Development Bank (ADB)	Rehabilitation of feeder roads	8,977,169,841.30			
RCPRP	International Fund for Agricultural Develop- ment (IFAD)	Rehabilitation of feeder roads	18,179,661,681.00			
	Total 59,403,677,555.20					

Source: RMFA Audited Financial Statements for the 18 months ended 31st December 2012

Actual expenditure on rehabilitation was not distinguished between feeder roads and trunk roads in SLRA's Financial Statements for 2010-2011. However, expenditure on rehabilitation of roads by SLRA according to the 2010 and 2011 financial statements amounted to Le 23, 913, 753 billion:

Year	Amount
	(Le'000)
2010	14, 624, 488
2011	9, 289, 265
Total	23, 913, 753

Development partners also spent a total of Le 59, 403,677,552.20 (billion) on the rehabilitation of feeder roads for the period under review. See table below.

Table 2.4 Actual expenditure on feeder roads by the various projects for the period 2010-2012

Source: Projects Financial Statements for the period 2010-2012

2.8 ORGANISATIONAL STRUCTURE

Refer to Appendix 5 for the proposed organogram of SLRA.

l able No 3.1						
Contractor	Description of work	Location	Length (km) Qty./ Size	Start date	Intended comple- tion date	Contract Val- ue(Le000)
Kabasse Construc- tion & Gen- eral Ser- vices	Rehabilitation: Preliminaries Setting out Clearing works Earth works Culvert works Re-gravelling	Mabanta – Yeli Sanda Road- Makeni	5km	2/6/11	2/10/11	144,697,000.00
Magbenteh & Sons Enterprise	Rehabilitation & construction of one (1) twin box and 3 pipe culverts	Malal Junction - Rochein Malal Road Mile 91	8km 6m*4m *2m	1/6/11	9/9/11	123,538,997.48
Bonsa General Services	Rehabilitation: Preliminaries Setting out Clearing works Earth works Culvert works	Jimmy – Morma- joe Bo Dis- trict	12km	26/8/10	26/11/10	27,096,550.00
Total						195,332,547.48

FINDINGS

3.

3.1 TIMELINESS AND SPECIFICATIONS OF FEEDER ROAD WORKS

Table No. 3.2						
Contractor	Description of work	Location	Length (km) Qty./Size	Start date	Intended completion date	Contract Value (Le000)
Amie-Farm Construction & Trading Enterprises	Construction of 6 box cul- verts	Kumrabai through Masseprr - Man- jehun feeder road Tonkolili District	Km0- km20	1/4/1 0	30/9/10	192,396,000
Amir Con- struction Company	Rehabilita- tion of feeder road consist- ing of cam- ber for- mation, ditch, cul- verts and bridge works	Blama - Ngogbe- bu Lot 8b Bo District	7km	Feb 2010	30/7/10	430,506,890
Santmol Con- struction En- terprise	Rehabilita- tion	Port Loko – Gberay Bana Road Lot 1A, Maforki Chiefdom Port Loko District	10km	Feb 2010	Jul 2010	591,267,337.33
ABTO Inter- national Agency	Rehabilita- tion	Port Loko – Gberay Bana Road Lot 1C Maforki Chiefdom Port Loko District	11km	Feb 2010	Jul 2010	619,948,300
	TOTAL					

3.1.1 Award of contracts by SLRA and RPSDP for execution during the raining season

The NRFRP (2.3.1) states that road construction activities are highly weather dependent and can only be undertaken during certain periods of the year. Proper and realistic planning by all relevant stakeholders will be key in this regard. The policy emphasises the need to indicate the period of the year when it is technically appropriate to implement construction/rehabilitation of rural feeder roads. According to the NRFRP, the following rehabilitation works should not be carried out during the months of June, July and August:

- clearing
- earthworks
- side drains
- · pavement works
- bridges
- box culverts
- pipe culverts

It was observed during review of contract documents that a proper and realistic planning was not carried out by stakeholders before the award of some contracts to Contractors. The team also noted that rehabilitation works in respect of SLRA and RPSDP were carried out during the rainy months of June, July and August as illustrated in the tables below. Further review of measured work, payment certificates, Bill of Quantities (BOQs) and summary of cost estimates of both SLRA and RPSDP indicated that rehabilitation work on clearing, earth works and side drains were carried out during these said months.

Table 3.1. Contracts executed during the months of June, July and August – SLRA

Source: SLRA contract documents

Table 3.2. Contracts executed during the months of June, July and August – RPSDP

Source: RPSDP contract documents

In addition, interviews conducted with the Yabaima village community in Kenema District revealed that excavation and culvert works were carried out during the rainy season at the time of rehabilitation of the Gandorhun to Yabaima feeder road (7km) by Leo Tech Services Construction and Trading Company (SL) Ltd.

The representatives of Mansumana village also disclosed that the following contractors of RPSDP undertook the rehabilitation of Yele to Mansumana feeder road (20km) in the Tonkolili District during the rainy season:

- Jamad Construction Enterprise;
- Mylans Construction Company;
- Samsahid Construction and Trading Enterprise; and
- Amucon International Agencies.

3.1.2 Payments made to Contractors for incomplete rehabilitation of feeder road works

It is clearly stated in the SLRA and the various projects contract agreements that the Contractor may commence execution of the works on the start date and shall carry out the work





in accordance with the program submitted by him, as updated with the approval of the Project Manager and complete them by the required completion date. It further requires that the Employer shall make advance payment to the Contractor of the amount stated in the contract after the Contractor has:

- delivered to the site construction equipment and/or materials for initiating the work, and
- submitted the Advance Payment Guarantee.

In addition, the Contractor shall submit to the Project Manager monthly statements of the estimated value of the work executed, less the cumulative amount certified previously. The

Project Manager shall check the Contractor's executed work and certify the amount to be paid to the Contractor. According to the contract agreements, payments shall be adjusted for deductions for advance payment and retention. The Employer shall pay the amount certified by the Project Manager within 45 days of the date of each certificate.



According to the NRFRP (3.1), all works are to be certified by SLRA and the relevant Local Councils before payment.

SLRA

The rehabilita-

tion of Manonko Junction to Futaneh feeder road in Bombali District (7km) requires the construction of 4 pipe culverts as indicated in the contract documents. However, during site verification on the 24th of April 2013, the team observed that only 1 pipe culvert was constructed on the road. There were also 37 cast pipes along the road for the construction of the remaining 3 pipe culverts as shown in picture 1 below.

It was confirmed by a representative of the Contractor and the payment certificate that a final payment of Le92, 723,598.50 (million) was paid to the Contractor on the 24th of October 2012.

The rehabilitation of Makenneh Junction to Teko feeder road (5.7km) in Bombali District also required the construction of 7 pipe culverts as disclosed in the contract documents. Conversely, we observed that 4 pipe culverts were not constructed on the road as at the time of our visit on the 24th of April 2013. See picture 2 below.





Partial view of uninstalled pipe culverts at Manonko Junction to Futaneh in Bombali District (pic. 1)

Partial view of cast pipes not installed at Makenneh Junction to Teko in Bombali District (pic. 2)

RPSDP

It was noted during document review and confirmed through interviews that the Rehabilitation of Fullah Town to Makama feeder road (10km) in Bombali District was terminated by the Employer due to poor performance by the Contractor. It was verified during site visitation on the 22nd of April 2013 that the rehabilitation work on the road was incomplete as picture 3 below depicts. It was confirmed through a review of the payment certificates that an advance payment of Le199, 500,000.00 (million) and an interim payment of Le134, 936,400.00 (million) was made to the Con-





tractor on the 2nd of March and the 18th of May 2010 respectively. Irrespective of these payments, there was no evidence to show that the contract had been re-awarded to another Contractor since the time of termination.



Wing walls of box culvert damaged and not backfilled at Fullah Town to Makama feeder road –

Bombali District (Photo No. 3)

The rehabilitation of Kumbrabai through Massiprr to Manjehun feeder road in Tonkolili (20km) District requires the construction of three (3) small bridges as stated in the contract documents. However, we observed during physical observation on the 1st of May 2013 that the first bridge was not backfilled and the remaining two bridges were not completed by the Contractor. Despite the incomplete work, a final payment of Le93,490,579.20 (million) and Le6,963,432.21 (million)

were paid to the Contractor on the 15th of August and the 14th of December 2011 spectively.

re-

Interviews with the community people also disclosed that the rehabilitation of the road stopped at Maseri Bana where the two incomplete bridges are located instead of Manjehun where the road work should end. As a result, the road is impassable during the rainy season and it is impossible for vehicles to reach the end of the road at Manjehun. See pictures 4 and 5 below.







complete bridge at Masseprr to Manjehun (pic.4)

2nd Incomplete bridge at Masseprr to Manjehun (pic. 5)

1st In-

Furthermore, the rehabilitation of Blama to Ngogbebu (Lot 8a) feeder road (5km) in Bo District requires the excavation of rocks as stipulated in the contract documents. However, we observed during physical inspection on the 3rd of May 2013 that the rocks were not excavated. As a result, the road was impassable because of incomplete earth work and this prevented the team from continuing the verification exercise. It was confirmed through a review of the payment certificates that a final payment of Le96, 054, 940.00 (million) was paid to the Contractor on the 9th of May 2012 for additional work done on the road. See pictures 6 and 7 below.

Incomplete earthwork at Blama to Ngogbebu feeder road in Bo District (pic. 6 & 7)

In addition, we observed during physical examination on the 4th of May 2013 that the construction of the bridge at Njala to Kpamanjama feeder road (5km) in Bo District was incomplete. Instead of the bridge guard, there were naked and protruding iron rods on both sides of the bridge. It was confirmed through a review of payment certificates that a final payment of Le51,016,500.(million) was paid to the Contractor on the 29th of August 2011. See picture 8 below.

Incomplete bridge with naked and protruding iron rods at Njala to Kpamanjama feeder road in Bo District (pic. 8)

1

ASREP

The rehabilitation of Panguma DFO Compound Lot 3 (6.8km) in Kenema District requires the construction of culverts and bridges as stated in the contract documents. However, it was observed during physical inspection on the 15th of May 2013 that the bridge and culvert works were incomplete. Interviews with the community people disclosed that the road works were abandoned by the Contractor just





after the construction of the bridge due to a diamond that was found during the time of the road work. An amount of Le189, 122, 526.00 (million) was paid to the Contractor on the 9th of August 2012. See pictures 9, 10 and 11 below.

Incomplete bridge at DFO Compound-Kenema District (pic. 9)

Incomplete pipe culvert at DFO Compound-Kenema District (pic. 10)

Abandoned bridge work DFO Compound Kenema District (pic. 11)





certificates of completion, the audit team noted that payments were still made to Contractors for road works not completed.

Please refer to Appendix 6 for further details of these incomplete feeder road contracts.

3.1.3 Unacceptable material used to backfill culverts

According to the ASREP contract agreement dated May 2011 (3.4), all spaces excavated and not occupied by pipes or other permanent structures shall be refilled with selected material. Such material shall be free from large lumps, wood or any organic matter. Unacceptable materials shall be:

- a. Peat, materials from swamps, marshes and bogs
- b. Logs, stumps and perishable material.

The team observed through physical examination undertaken on the 27th of April 2013 that woods instead of suitable laterite material were used to refill constructed culverts during the rehabilitation of a 10.6 km of feeder road from Makump to Kangbatama, Port Loko District (Lot 1) by K. K. Kargbo Enterprise under ASREP as picture 12 below depicts. This contravenes the technical data in 3.4 of the ASREP contract agreement dated May 2011.



Logs used to backfill a culvert at Makump to Kangbatama, Port Loko District (pic. 12)

3.1.4 Works not carried out in accordance with technical specifications and drawings

The contract agreements of SLRA and the respective projects state that the Contractor shall

construct and install the works in accordance with the standards of the feeder road technical specifications and drawings.

ASREP

According to the technical specifications and drawings as stated in the contract documents, constructed culverts should have an offshoot or channel. However, the team observed during physical observation on the 26th of April 2013 that the pipe culverts and the second box culvert constructed during the rehabilitation of a 9.20 km of feeder road from Masimera to Maleleba, Port Loko District (Lot 3) by Kan Construction Enterprise did not have an offshoot or channel. This prevents the inflow of water to the inlet and the outflow of water from the outlet as pictures 13 and 14 below depicts.

Interviews with representatives of the Masimera Village on the 26th of April 2013 revealed that the depth of the ditch excavation was shallow, the road surface was not compacted with enough laterite material and the thickness of the deck of the box culvert in the photo below was not in accordance with the standard requirement, thus preventing heavy vehicles from plying the road. Further interviews with SLRA personnel during the site verification also revealed that culverts were not constructed at three strategic points of the road.

A box culvert without an offshoot Masimera to Maleleba, Port Loko District (pic. 13)

A pipe culvert without an offshoot Masimera to Maleleba, Port Loko District (pic.14)

Interviews and physical observation of pipe culverts proved that eight pipes should be used to construct a pipe culvert in order to get the standard road width specification of 6 m. However, the team noted during physical observation on the 27th of April 2013 that seven pipes were used instead of eight to construct the pipe culverts during the rehabilitation of a 10.6 km of feeder road from Makump to Kangbatama, Port Loko District (Lot 1) by K. K. Kargbo Enterprise. This reduced the road width and size of the constructed culverts to 5.5 m instead of the standard specification of 6 m.

Further, site verification on the said date disclosed that two big trees along the road occupied 2 m of the road and reduced the road width to 4 m as picture 15 shows. There were also two trees in the middle of the ditch as shown in picture 16. The constructed pipe culverts were poorly plastered, as picture 17 below depicts.

An interview with a representative of Makump Village on the 27th of April 2013 confirmed that the ditches were shallow. The community people also revealed that approximately (3-5) three to five pipe culverts were not properly backfilled.

Tree on the road (pic.15)

Trees in the ditch (pic.16)







Poorly plastered pipe culvert (pic. 17)

RPSDP

According to the technical specifications and drawings in the contract documents, constructed pipe culverts should have wing walls. The audit team, through physical inspection on the 26th of April 2013 observed that the pipe culverts constructed during the rehabilitation of Port Loko – Gberay Bana Road, Lot 1C (11.0 km), Maforki Chiefdom, Port Loko District by ABTO International Agency were without wing walls as the picture below illustrates.



A pipe culvert without wing walls at Port Loko - Gberay Bana Road

3.2 NON-COMPLIANCE WITH THE NATIONAL RURAL FEEDER ROADS POLICY

3.2.1 Unavailability of an all-inclusive technical standard for rural feeder roads

The National Rural Feeder Road Policy of May 2011 (2.3.5) states that SLRA is responsible for the setting up of technical standards for the rehabilitation and maintenance of feeder roads and ensuring compliance to standards.

According to the National Rural Feeder Roads Policy, standards have been developed for composition of traffic, carriageway width, shoulder width, side drainage ditches, average constructed thickness of laterite/gravel surface, constructed carriageway camber/cross fall, right of way, estimated life period and design speed.

The audit has revealed that SLRA have not developed an all-inclusive technical standard for the rehabilitation and maintenance of rural feeder roads in the country. For example, standards for the construction of concrete structures like pipe culverts, single and twin box culverts and bridges, etc. are yet to be developed.

3.2.2 No evidence of an updated national feeder road inventory and road condition survey

The National Rural Feeder Road Policy of May 2011 (2.3.1) states that a road inventory and road condition survey will be carried out to clearly define the lengths and conditions of the rural feeder roads in the country. The policy emphasises that the activity is the responsibility of SLRA, although other organisations (e.g. public institutions or private companies) with the capacity to carry out some of these functions would be allowed to do so in collaboration with SLRA.

During the course of the audit, SLRA did not provide any evidence of an updated National Road Inventory and Road Condition Survey documents for planning, development and management of the feeder road network in the country for the period under review.

According to interviews with SLRA key personnel, the national road condition survey should take into consideration existing structures like culverts and bridges that are in a poor state and the road works to be carried out during rehabilitation. However, the audit team observed during site verification that existing structures like culverts and bridges in poor conditions were not con-

sidered by SLRA for rehabilitation.

It was evident during physical inspection on the 29th of April 2013 that an existing damaged bridge was ignored during the rehabilitation of Yele to Mansumana Road in the Gbonkolenken Chiefdom (km 0-km 20), Tonkolili District by four Contractors of RPDSP:

- Jamad Construction Enterprise
- Mylans Construction Company
- Amucon International Agencies and
- Samsahid Construction and Trading Enterprises





• See picture 18 below.





Furthermore, physical inspection on the 14th of May 2013 showed that an existing damaged pipe culvert was not considered during the rehabilitation of Boajibu to Ngokoma feeder road (11.45 km) in Kenema District by Simbaru United Pharmaceutical and Construction Enterprise under the RCPRP. See picture 19 below.

Existing bridge at Yele to Mansumana (pic. 18)

Existing pipe culvert Boajibu to Ngokoma (pic. 19)

3.2.3 Limited collaboration and coordination of stakeholders on feeder road works

The National Rural Feeder Road Policy of May 2011 (2.3.5) states that the National Rural Feeder Road Committee will harmonise and coordinate all activities relating to the implementation of rural feeder roads.

According to section 5 (2) (n) of the Sierra Leone Roads Authority (Amendment) Act, 2010, the Authority shall provide technical guidance and support to Local Councils in the maintenance of roads devolved to them under the Local Government Act, 2004.

Interviews with SLRA and Councils disclosed that there is limited collaboration and cooperation amongst key stakeholders on feeder road works. In Port Loko and Tonkolili districts, feeder road works were undertaken by development partners without the involvement of the District Councils and SLRA District Engineers. For example, in Tonkolili District, Action Aid was constructing a bridge between Mabom and Masan, and the National Commission for Social Action (NACSA) was also engaged in a feeder road project along the Bumbuna axis. In Port Loko District, New Rice for Africa (NERICA) and the European Union (EU) in some cases do not involve the District Council in feeder road projects undertaken in the district. Examples are the Marampa and Lokomasama projects.

In addition, interviews in Bombali, Tonkolili, Bo and Western Rural Area districts revealed that the District Councils have not been receiving adequate technical support and guidance from SLRA for the rehabilitation and maintenance of feeder roads in their respective districts

The National Rural Feeder Road Policy of May 2011 (2.3.4) also states that local communities shall actively participate in the identification, planning, execution and monitoring of feeder road construction, rehabilitation and maintenance.

Further interviews confirmed that local communities actively participated in the identification and execution of feeder road works. However, they also reported that they were not involved in the planning and monitoring of feeder road works in their localities. They explained that they were not informed about the description or specification of the work to be done by Contractors as specified in the contract agreement of the various feeder road projects.

3.2.4 Safety measures not implemented and no axle load control for feeder roads

The National Rural Feeder Road Policy of May 2011 (2.3.1) states that road safety related issues will be integrated in the planning and development of rural roads so that appropriate geometric design standards are followed, traffic signs erected, and potentially hazardous sections protected, using traffic calming devices. The National Rural Feeder Road Policy of May 2011 (2.3.3) states that traffic laws will be enacted that specifies the maximum axle and overall loads for rural feeder roads.

It was observed during site verification of ongoing feeder road contracts like Makump to Kangbatama feeder road (10.6km) lot 1 in Port Loko District under the ASREP that traffic signs were not erected and potentially hazardous sections of the road, not protected with traffic calming devices. The team observed through a review of payment certificates that payments were made

to Contractors by the respective projects for traffic management measures but these measures were not implemented by Contractors as at the time of the site visitation. In addition, interviews revealed that SLRA have not enacted appropriate traffic laws that specify the maximum axle and overall loads for rural feeder roads in the country.

3.3 INADEQUATE MANAGEMENT OF THE MAINTENANCE OF RURAL FEED-ER ROADS

3.3.1 No maintenance of feeder roads

According to Section 11 (1) of the Sierra Leone Roads Authority Act of 1992, "the Authority may, with the approval of the Minister, by order in the Gazette delegate to any local authority or any competent body or person the control, maintenance and protection of any road...".

The responsibilities for maintenance of feeder roads as described in the National Rural Feeder Roads Policy of May 2011(2.3.5) are stated thus:

Sierra Leone Roads Authority:

- Development and sharing of database and management of feeder roads
- Setting of technical standards for maintenance with regard to feeder roads
- Ensure compliance to standards

Local councils:

• Maintenance of all feeder roads based on immediate devolution

Documents reviewed, unearthed that feeder roads rehabilitated by SLRA and development partners were handed over to the District Councils by SLRA for maintenance on the 2nd of November 2011.

The team observed during site verification that for the period 2010 to 2012, twenty rehabilitated feeder roads visited were not maintained. The following issues were identified as presented in the photos below:

- silted pipe and box culverts;
- silted side ditches and mitre drains;
- overgrown shrubs and overhanging trees on side ditches and mitre drains;
- potholes and stumps on carriageway/road surface;
- poor gravel surfacing with laterite material and compaction

Pothole at Manoko junction to Futaneh feeder - Silted ditch at Blama to Golahun Vaama feeder-Bombali District as a 24th April, 2013 Kenema District as at 13th May, 2013

Silted pipe culvert at Kebbie Town to Njopowahun ta

feeder road-Bo District as at 5th April, 2013 2013

Soil erosion in the middle of Yeli Sanda Maban-

feeder road-Bombali District as at 23rd April,



Overgrown shrubs along Yele to Mansumana feeder road Tonkolili District as at 29th April, 2013

Further investigation done on the issue of maintenance of feeder roads in the Local councils revealed that funds were not available to undertake maintenance works.

On the other hand, section 9(2)(d) of the Road Maintenance Fund Administration (RMFA) Act, No.3 of 2010, requires RMFA to "approve any application from any Local council or body for funding from the Fund, of any road-related activity".

The National Rural Feeder Roads Policy of 2011 also provides that RMFA should dedicate 20% of the Road Fund revenue towards the maintenance of rural feeder roads.

The team noted that there was no evidence of the release of funds by RMFA to the District Councils for the period 2010 to 2012.

4. **CONCLUSIONS**

During the conduct of the audit, the auditors noted generally that the stakeholders were aware of the policies and regulations on the rehabilitation and maintenance of feeder roads. Nevertheless, there were issues of non compliance and the rehabilitated feeder roads were not done with due regards to the cost, quality and time and in order to achieve the intended objectives based on the following conclusions:

4.1 INEFFICIENT SUPERVISION AND MONITORING BY SLRA

The execution of feeder road contracts during the rainy months of June, July and August, has subsequently affected the rehabilitation works carried out by Contractors. In effect, this has contributed to the damage of road works undertaken; for example, soil erosion resulting in poor quality of work done.

It is stipulated in the contract agreement that a payment certificate should be prepared and certified based on measured work before payment is made to a Contractor. The fact that the Contractors were paid for incomplete work is an indication that SLRA does not efficiently supervise and monitor feeder road works. This has caused difficulties in accessing facilities like market places, hospitals, schools, farming areas etc.

The use of unacceptable materials like logs to backfill culverts has affected the life span of the constructed culverts and the road. This has resulted in early deterioration of the structures. As such, there is a clear indication that one of the values of SLRA "alert to ensuring value for money" was not achieved for the period under review.

Road works have not been carried out as specified in the contract documents and the Contractors have failed to adhere to contract specifications and drawings because of the lack of adequate supervision and monitoring of feeder road works by SLRA.

4.2 NON-COMPLIANCE WITH THE NATIONAL RURAL FEEDER ROAD POLICY

The unavailability of an all-inclusive technical standard for the rehabilitation and maintenance of feeder roads have resulted in inconsistency and non-standardisation of feeder road works in the country.

In addition, the absence of an updated National Feeder Road Inventory and Road Condition Survey has made it difficult to determine the current length and conditions of feeder roads and has also resulted in poor planning of feeder road works in the country.

The NRFRC is responsible for harmonising and coordinating all feeder road activities in the country. However, the NRFRC have failed to resolve the issue of collaboration and cooperation between stakeholders on feeder road works. It has led to difficulties in achieving effectiveness in the implementation of feeder road works. There has been limited disclosure of information between stakeholders in the identification, planning, execution and monitoring of feeder road works. This has, in turn, affected the smooth operation of feeder road activities in the country.

Despite the fact that the local communities should be actively involved in the planning and monitoring of feeder road works as stated in the NRFRP, it has not been the case. This has prevented the local communities from contributing towards identifying problem areas that need rehabilitation when executing the road works.

The fact that existing structures were not considered by SLRA for rehabilitation has contributed to the deplorable condition of the structures and affected the sustainability of the roads.

Non-compliance with feeder road safety measures by SLRA will lead to an increase in the number of road accidents and possibly loss of lives. Furthermore, the non-implementation of axle load control (which shows the weight of the vehicle that should ply the road) has caused damage to feeder roads and their related structures, leading to closure of the roads.

4.3 HUGE EXPENDITURE ON REHABILITATION DUE TO LACK OF MAINTE-NANCE OF FEEDER ROADS

A total amount of Le 83,317,430,555.20 was spent by SLRA and the various projects on rehabilitation for the period 2010 and 2012. The huge sums of money spent on rehabilitation and the failure to undertake routine or periodic maintenance, indicates that resources are not been utilised in an economic and efficient manner. A lot of money would have been saved if the roads were maintained. In the absence of routine or periodic maintenance, the intention of having good and sustainable road network in the country will not be achieved.

5. RECOMMENDATIONS

5.1 TIMELY EXECUTION, APPROPRIATE SUPERVISION AND MONITORING OF FEEDER ROADS

SLRA and other development partners that are engaged in the implementation of feeder road projects should take into consideration the construction/rehabilitation and maintenance calendar as required by the NRFRP before the award of contracts. This will prevent rehabilitation works to be carried out during the rainy months of June, July and August so as to achieve a sustainable feeder road network.

SLRA together with the Project Coordinating Units of the various projects should ensure that contracts are completed within the required completion dates. They should also conduct physical inspection of project sites before preparing measured work certificates and making payments to Contractors. This will ensure value for money and effective implementation of feeder road works. SLRA should ensure that all incomplete contracts are either completed by Contractors or refunds of amounts expended for incomplete work are made.

SLRA should improve on its level of supervision and monitoring during the rehabilitation of feeder roader roads. All stakeholders should ensure that feeder road works are carried out in accordance with the technical specifications and drawings.

5.2 ENSURE COMPLIANCE WITH THE NATIONAL RURAL FEEDER ROADS POLICY

SLRA should develop an all-inclusive technical standard for the rehabilitation and maintenance of feeder roads in the country.

SLRA in collaboration with other stakeholders should conduct road condition surveys and develop an updated National Road Inventory periodically. Information from the National Road Inventory and Condition Survey can be used by SLRA and other stakeholders to determine the length and condition of feeder roads. It will also ensure proper planning, development and management of the feeder road network, thereby reducing the potential occurrence of structural damage of bridges, culverts and other related structures.

In addition, SLRA has to take into consideration existing structures such as culverts and bridges that are in a poor state when undertaking a road condition survey for inclusion in the contract agreements. This will enhance the sustainability of feeder roads.

Furthermore, SLRA in collaboration with the Local Councils should ensure that the local communities actively participate in the planning and monitoring of feeder road works in their localities. This will help them in identifying problem areas on the road and avoid misunderstanding between contractors and the local communities in terms of contract specifications.

It is highly recommended that the NRFRC should ensure that all activities relating to the implementation of rural feeder roads are effectively coordinated and harmonised to facilitate the free flow of information and reduce potential conflict of interest amongst stakeholders. SLRA should provide the necessary technical guidance and support to Local Councils to ensure efficient management of feeder roads.

Necessary steps should be taken by SLRA to ensure that traffic signs are erected along feeder roads. Hazardous sections of the roads should also be protected with traffic calming devices during the execution of feeder road projects in order to prevent accidents. They should ensure that traffic management measures are implemented by contractors during road works. SLRA should implement axle load control to avert the damage to culverts and bridges.

5.3 COLLABORATE AND BUILD THE CAPACITY OF LOCAL COUNCILS FOR THE MAINTENANCE OF RURAL FEEDER ROADS

In order for SLRA to effectively manage the feeder road network in the country, they should collaborate with Local Councils and provide them with the necessary technical support and guidance in undertaking maintenance works. Routine and periodic maintenance should be a priority in the provision of safe, reliable and sustainable national road system for the enhancement of the socio-economic development of the country.

APPENDICES

Appendix II				
Institution/Location	People Interviewed			
MWHI	The Permanent Secretary			
SLRA	The Director General The Director of Feeder Roads The Director of Finance The Chief Engineer, Maintenance of Feeder Roads The Chief Engineer, Rehabilitation/Development of Feeder Roads			
RMFA	The Chief Executive Officer The Director of Finance and Procurement			
NRA	The Director of Finance			
SLRTA	The Finance Manager			
MAFFS	The Permanent Secretary			
RPSDP	The Project Coordinator			
ASREP	The Project Coordinator			
RCPRP	The Financial Accountant and SLRA Project Engineer			
SLRA Regional Headquarters: Western Area Rural District Council Mile 91 Bombali Port Loko Bo Kenema	The District Engineer The Chief Regional Engineer and the District Engineer """""""""""""""""""""""""""""""""""			
District Councils: Western Area Rural District Council Bombali Port Loko Tonkolili Bo Kenema	Chief Administrator and the Civil Works Engineer """"""""""""""""""""""""""""""""""			
Bombali and Port Loko	Two contractors			
Bombali Port Loko	The community people at: Manonko Junction to Futaneh, Konta Baishearay Village Port Loko to Maforki, Gberebana Chiefdom Masimera to Maleleba, Masimera Village Makump to Kagbanthana, Makump Village			
Tonkolili	Kumbrabai through Massipr Manjehun, Maseribana Village Yele to Mansumana, Mansumana Village			
Во	Njala to Kpamanjama, Kpamanjama Village Kebbie Town to Njopowahun, Njopowahun Village			
Kenema	Blama to Golahun, Vaama to Golahun, Vaama Village Gandorhun to Yabaima, Yabaima Village Palima to Gangama, Gangama Village Boajibu to Ngokoma, Ngawama Village Panguma to DFO Compound, DFO Compound			

APPENDIX 1: LIST OF GEOGRAPHICAL AREAS AND FEEDER ROADS VISITED

Western Area Urban

Sierra Leone Roads Authority Headquarters Ministry of Works, Housing and Infrastructure

Road Maintenance Fund Administration

National Revenue Authority

Sierra Leone Road Transport Authority

Ministry of Agriculture, Forestry and Food Security

Rural and Private Sector Rehabilitation Project

Agricultural Sector Rehabilitation Project

Rehabilitation and Community-Based Poverty Reduction Project

Road

New England Government Wharf Bathurst Street Kissy Road Youyi Building

PWD Junction, Kissy

Former UN House

Former UN House

Mudge Farm, Aberdeen

Makeni

SLRA Regional Hadquarters Bombali District Council

Feeder Roads

Manonko Junction to Futaneh Feeder Road Mankenneh Junction to Teko Feeder Road Yeli Sanda Road, Mabanta Feeder Road Makump to Merika Feeder Road Fulla Town to Makama Feeder Road Makama to Rochain Feeder Road

Tonkolili

SLRA Regional Headquarters Tonkolili District Council

Feeder Roads

Kumbrabai through Massiprr Manjehun Feeder Road Yele to Mansumana Feeder Road

Port Loko

SLRA Regional Headquarters Port Loko District Council

Feeder Roads

Makump to Kagbanthana Feeder Road Mathoir to Malelemba Feeder Road Malelemba to Masimera Feeder Road Port Loko to Maforki Chiefdom

Mile 91

SLRA Regional Headquarters

Bo

SLRA Regional Headquarters Bo District Council

Feeder Roads

Kebbie Town to Njopowahun Feeder Road Blama to Ngogbebu Feeder Road Njala to Kpamanjama

Kenema

SLRA Regional Headquarters Kenema District Council

Feeder Roads

Gandorhun to Yabaima Feeder Road Boajibu to Ngokoma Feeder Road Palima to Gangama Feeder Road Blama to Golahun Vaama Feeder Road Panguma to DFO Compound Feeder Road

APPENDIX II: KEY PERSONNEL INTERVIEWED

APPENDIX III:

PROCESS OF REHABILITATION OF RURAL FEEDER ROADS BY PROJECTS

Rural and Private Sector Development Project (RPSDP)

This process describes the rehabilitation of feeder roads during the first phase of RPSDP in thirteen (13) districts.

The District Councils should select the roads using the prescribed criteria which include linking agricultural productive areas like market places, farmers based organizations and agricultural business centres and also social amenities like schools and hospitals.

The list of selected feeder roads should be sent to RPSDP and MAFFS for approval. The approved list should be forwarded to SLRA for mapping and road conditions survey.

SLRA should prepare a technical data consisting of specifications, un-priced BOQs, drawings, and Line Diagrams. A bidding document should be prepared by RPSDP in accordance with the standard bidding document of NPPA with modifications, to include World Bank guidelines and financial agreements.

The method of procurement should be the National Competitive Bidding (NCB). RPSDP should publish combined adverts for the thirteen (13) districts already covered and the final bidding documents should be prepared by SLRA, the District Councils and RPSDP, in two centres, i.e. in the North in Makeni and the South and East in Bo.

After the final preparation of the documents, the District Councils should issue a bidding document to prospective bidders for a period of thirty (30) days. Then the District Councils should hold a public bid opening.

A collective bid evaluation should be held in the two centres. The bid evaluation should be prepared at the two centres and taken to the various procurement committees which are set up for this purpose. The final bid evaluation report and recommendation for award of contracts should be sent to RPSDP. RPSDP then forward the report to the World Bank for clearance of no objection. This should be returned with comments which are reviewed and incorporated in the evaluation reports.

RPSDP should then give District Councils no objections to award contracts to the successful bidders. A pre-commencement meeting should be held in order for contractors to understand the terms of the contract. The District Councils should then sign contract with the bidders upon submission of a Performance Security.

Advance payment should be made within thirty (30) days and upon request by contractors against the submission of a bank guarantee of the same equivalent i.e. 20%. This advance payment should be recovered progressively. The District Councils should prepare an interim payment certificates which are certified by the respective District Councils.

The handing-over of the project site should be done by the District Councils. The Contractors should commence work within twenty eight (28) days after the handing-over.

Then the role of SLRA should be supervision. SLRA should designates engineers and superin-

tendents on a regular basis to ensure that (1) the feeder roads are rehabilitated to the specifications, design and line diagrams (2) to ensure quality assurance and (3)to prepare interim payment certificates in accordance with work done (as it is a unit-rate contract-added measured work).

On contract management, the monitoring and supervision should be done by RPSDP, SLRA and the District Councils. Supervision should sometimes be done by the Ministries, i.e. MWHI, MAFFS and the Ministry of Trade and Industry (MTI).

The respective District Councils should present the interim payment certificates with a cover letter to RPSDP requesting for the release of funds to a special account operated by the District Councils. The District Council Chairman and the Chief Administrator are the signatories to the account.

RPSDP sometimes verifies the interim payment certificates but all final payment certificates should be verified by RPSDP.

SLRA Engineers should then prepare the final payment certificates and the project should verify the final payment to check for defects after the defect liability period of 90 days. When the final payment certificate is prepared, the contractors should receive half of the 10% retention fee.

Agricultural Sector Rehabilitation Project (ASREP)

ASREP should identify the communities in the districts in which they operate that are engaged in farming. The communities should identify the roads leading to the productive areas that require rehabilitation which will open up farms and the market places.

After the identification of the roads, SLRA is called upon to undertake the road condition survey. The findings of the survey should be used to advertise for interested bidders. The procurement process will then starts, the bids should be opened and evaluated; the most responsive bidder should be awarded the contract.

The project site should be handed over to the Contractor in the presence of representatives of the community, SLRA, District Councils and ASREP.

An advance payment of 30% should be made to the Contractor upon request for the mobilization and commencement of work.

Periodic monitoring should be done by ASREP and SLRA at district level. There is a Liaison Officer at SLRA headquarters, who should be responsible to ensure that staff at district level carries out the monitoring and measurement of work done.

A measured work certificate should be prepared by SLRA Engineers and approved by ASREP Engineer. This should enable the processing of payment to the Contractor. The processed documents should be sent to the Project Coordinator for submission to the Ministry of Finance and Economic Development (MoFED). MoFED should approve payment and return the documents to ASREP for onward submission to the African Development Bank (ADB) for direct payment to the contractor's account.

A practical completion certificate should be given to the contractor before the defect liability period and a completion certificate is issued to the contractor after the defect liability period, together with the retention money.

Rural and Community Based Poverty Reduction Project (RCPRP)

SLRA should meet with RCPRP to identify the target for the year on the number of feeder roads to be rehabilitated. The District Councils should select the feeder roads to be rehabilitated in their districts.

The list of selected roads should be sent to the NRFRC for their comments on selection, funding, or any change along the stretch of the road. The list should then be submitted to the District Agricultural Officers and SLRA District Engineers by NRFRC for road prioritisation. The SLRA Engineer should check for the connectivity. The Agricultural Officer should check on the agricultural viability of the road.

After this, a road condition survey should be done by the Project Engineer to determine the actual length of the road, the quantities of various activities to be done on the road, the preparation of Line Diagrams, the design of the road itself and the cost for rehabilitation of the road. SLRA should then submit the road condition survey report to the Project Coordinator of RCPRP who should further direct it to the Procurement/Finance Officers.

Upon approval by NRFRC, a request for funding should be made by RCPRP to the funding agency. If the road condition survey report is in line with RCPRP annual program, they should request for no objection which is sent to the Country Portfolio Manager at IFAD.

When the no objection is given, the procurement process should then start. SLRA should directly be involved at all stages of the procurement process.

After evaluation, the contract should be given to the most responsive bidder. A letter of notification of award of contract should be sent to the Contractor. Upon acceptance of the letter by the Contractor, the contract should then be signed by the Contractor and RCPRP.

If the Contractor chooses an advance payment, he must provide RCPRP with an Advance Payment Guarantee of 20-40%. On the other hand, the Contractor will choose pre-financing option in which he would use his own money to do the work.

Payments should be made to Contractors based on measured work. SLRA should issue a Certificate of Payment with 5% retention on the value of work done. Payment should be made by RCPRP and should direct it to the Contractor through his account.

After 3-6 months, a Certificate of Completion will be issued. The job should then handed-over to the District Councils.

APPENDIX IV: ROLES AND RESPONSIBILITIES OF KEY STAKEHOLDERS

INSTITUTIONAL RESPONSIBILITIES

Ministry of Works, Housing and Infrastructure:

- Setting the overall policy direction for feeder roads;
- Oversight and coordination functions for the feeder roads sector;2
- Resource mobilisation;
- Approval of rural feeder road programme and activities

APPENDIX VI: INCOMPLETE FEEDER ROAD CONTRACTS - SLRA

role of MWHI, a minimum capacity will be maintained at the Ministry for the discharge of its functions. The NRFRC is composed of six permanent members with two

representatives each, as follows:

	ī		1	r
	Financing	Road Fund	Road Fund	s s
	Contract value (Leones)	144,590,000.00	120,046,890.00	* s * v * I * F * C
cil	Start & end date	29/12/10 to 29/4/11	1/6/11 to 1/9/11	
are	Contractor	Konta Shearay Construction Services	Zam-Nak Construction & General Merchandise	Took is for the first term of
	Length (km) Qty./ Size	7km	5.7km	•
	Location	Manonko Junction to Futanch Bombali Dstrict	Mankenneh Junction to Teko Feeder Road Bombali District	
o f	Description of work	Rehabilitation and construction of (4No.) pipe culverts and 1 bridge	Rehabilitation and Construction of (7No.) Pipe Culverts	
the	-	Rehabil (4No.) I	Rehabil (7No.) 1	

and Food Security (MAFFS)

Source: SLRA contract documents RPSDP

- Ministry of Works Housing and Infrastructure (Chair)
- Sierra Leone Roads Authority (SLRA) (Secretariat)
- Ministry of Finance and Economic Development
- Ministry of Local Government and Rural Development
- Ministry of Agriculture, Forestry and Food Security
- Chairman of Association of Local Coun-Chairmen

The non permanent members that will be coopted as and when necessary (i.e. when there issues relating to areas of interest and have funds for the improvement of rural feeder road component) are as

follows:

- NaCSA,
- Ministry of Transport and Aviation,
- Local Council Representatives,
- NGO's
 - EPA-SL etc

Road Maintenance Fund Administration (RMFA)

Section 9(2) (a) of the Road Maintenance Fund Administration Act, 2010 states that, it shall be the function of the Road Maintenance Fund Administration to, manage and administer the Fund. Section 9(2) (d) the Act, states that, it shall be the function of the Road Maintenance Fund Administration to, approve any application from any local council or body for funding from Fund, of any road-related activity.

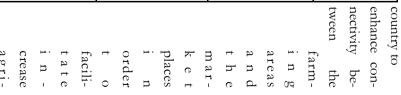
Ministry of Agriculture, Forestry

Performance Audit Report on NASSIT

APPENDIX VI: (CON'D) INCOMPLETE FEEDER ROAD CONTRACTS - SLRA

Description of work	Location	Length (km) Qty./ Size	Contractor	Start & end date	Contract value (Leones)	Financing
Rehabilitation of feeder road and construction of 17 pipe culverts and 9 box culverts	Fullah Town to Makama Road Bombali District	10km	Waka Fast Construction & General Services	January to June 2010	665,000,000.00	World Bank
Construction of 3 small bridges	Kumbrabai through Masseprr- Majehun Tonkolili District	Km0-km10	Jifaco Construction & Road Works Enterprises	March to September 2010	288,233,077.00	World Bank
Rehabilitation of feeder road	Kumbrabai through Masseprr- Majehun, Tonkolili District	Km10-km20	Peoples Construction & Fabrication	March to September 2010	641,331,000.00	World Bank
Clearing, Ditching, Camber Formation, Re-gravelling, 10 Pipe Culverts, 2 Single Box Culverts and a Bridge (6m*4m*2m)	Blama to Ngogbebu (Lot 8a) Bo District	5km	Sam King Machinery & Construction Services	5/1/10 to 30/6/10	170,550,000.00	World Bank
Rehabilitation of Road- Clearing, Camber Formation, Ditching, 6 Pipe Culverts and 3 single box Culverts.	Njala to Kpamanjama (Lot 9c) Bo District	5km	Ali & Sons Construction Services	5/1/10 to 30/6/10	436,051,000.00	World Bank

Source: RPSDP contract documents



MAFFS is a major stakeholder in the rehabilitation and maintenance of feeder roads in the

APPENDIX VI: (CON'D) INCOMPLETE FEEDER ROAD CONTRACTS - SLRA

Leone is A b o u t rural vil-	Financing	ADB	es tw
the gov- i n f r a - for agri- munities inlets and	Contract value (Leones)	945,612,630.00	er str cu de
of perish- a c r o s s r u r a l of their t h e i r	Start & end date	March 2012 to March 2013	ab vil co ag sta
	Contractor	Kots Integrated Service	
Rural The pro- ed stor-	Length (km) Qty./Size	6.8km	
ed stor- support are not important the pro- the pre- technolo- structure.	Location	Panguma-DFO Compound, Lot 3 Kenema District	t (
ASREP	Description of work	Preliminaries, Clearing Works, Earth Works, Gravelling, (8 No. Pipe Culverts, Bridge Works and Box Culverts.	a ·

cultural

productivity and marketing. The population of Sierra sentially rural and agrarian.

o thirds are farming families typically living in small ges varying between 100 to 1,500 inhabitants. Thus, nment recognizes the fact that improvement of this ructure is a prerequisite for restoring the potential ultural production in the project area. The rural comepend heavily on feeder roads, which are the main itlets for goods and services. Substantial quantities ble agricultural products need to be transported llages towards cities for marketing. Residents of ommunities rely on income generated from the sales ricultural produce to sustain them and improve andard of living.

and Private Sector Development Project (RPSDP)

ject supports to develop a system of bondage and warehouse receipts, including SLRA to upgrade critical road links which ready funded under the Road Fund but are for the value chains being supported under ject. In Sierra Leone, the project addresses sent critical needs for improved agricultural gies for production and for roads infra-

Agricultural Sector Rehabilitation Project (ASREP)

The overall objective of the Project is to bring the agricultural production back to pre-war levels and to improve food securihousehold level. To attain this objective, the ASREP provides support to agriculturproduction and capacity building including the rehabilitation of infrastructure.

Rehabilitation and Community-Based Poverty Reduction Project (RCPRP)

The RCPRP aims at reducing poverty and food insecurity, and improving livelihoods

for rural

communities. The project will reach its goals through the support to $\frac{6}{7}$

Source: ASREP contract documents

APPENDIX VII: RESPONSE FROM SLRA



SIERRA LEONE ROADS AUTHORITY

P.M.B. 1324 KISSY, FREETOWN SIERRA LEONE

SLRA / FR

December 9, 2013

The Auditor General Audit Service Sierra Leone 2nd floor. Lotto Building Freetown

Dear Sir / Madam,

SUBJECT:

RE: DRAFT PERFORMANCE AUDIT REPORT ON THE REHABILITATION AND MAINTENANCE OF FEEDER ROADS

Day File: 2118

In relation to the above subject, we wish to submit a response to the Performance Audit Report that was sent to SLRA on November 15, 2013.

We request you to please review our response and send us your feedback at your earliest convenience.

With thanks and we look forward to your usual cooperation.

Yours faithfully,

Abdulai A. Kamara

DEPUTY DIRECTOR GENERAL - SLRA

Cc: Head of Procurement - SLRA

Head Audit - SLRA

Telephone: 226565 Fax: 232 - 22 - 222346 Email: saloneroads@gmail.com



Republic of Sierra Leone



SIERRA LEONE ROADS AUTHORITY DEPARTMENT OF FEEDER ROADS

RESPONSE TO DRAFT PERFORMANCE AUDIT REPORT ON THE REHABILITATION AND MAINTENANCE OF FEEDER ROADS

Submitted by

Director of Feeder Roads

November 28, 2013

Audit Service Sierra Leone

2.0 Responses to Auditor General's findings

We wish to respond to your findings in the succeeding paragraphs. We would prefer to respond to them in the following sequence:

- Rural and Private Sector Development Project (RPSDP);
- · Agriculture Sector Development Project (ASREP);
- · Compliance with the National Feeder roads Policy; and
- Maintenance of feeder roads.

2.1 Rural and Private Sector Development Project (RPSDP)

The RPSDP is funded by the International Development Association (IDA), with funds made available for development of the agricultural sector (crop protection and agricultural sustainability). The primary objectives are geared towards delivery of matching grants and support to farmer Farmers Bases Organizations, support for enhancement of marketing agricultural commodities, etc. Although the RPSDP is primarily an agricultural development project but it has a road component for the rehabilitation of feeder roads in all 13 Districts of Sierra Leone. The improved feeder roads should provide easy access to market centers and in the other direction, attract other agricultural development and enhancement programmes.

- Phase 1 all 13 districts in Sierra Leone (2010 2011)
- Phase 2 9 Districts: Bo, Bonthe, Moyamba, Pujehun, Bombali, Tonkolili, Port Loko,
 Kambia, and the Western rural Districts (2013 2014)
- Phase 3 all 13 Districts Routine Maintenance of rehabilitated Phase 1 roads (Jan 2014 - Dec 2014)

2.1.1 Award of contracts by SLRA and RPSDP for execution during the rainy season

In line with the construction calendar for feeder roads, the most appropriate time for award of reconstruction and rehabilitation contracts is the end of the rainy season so that work can start towards the end of the raining season and continue during the dry season. However, contracts car also be awarded during the raining season, but only limited clearing works can commence during the raining period. These clearing works should be limited to brushing, grubbing, destumping culvert cleaning and drainage clearing.

Furthermore, for some projects, there is the tendency for the Project Management Unit of the Ministry, Department or Agency (MDA) involved to delay the procurement process, either due to delays in approvals or 'No Objection', disruptions in disbursements processes, etc. If any of these

risks occur, that may cause delay in the planned period for works execution. As a consequence award of contracts may be shifted to the raining season during which only limited clearing works can be done.

Therefore in response to the your findings in relation to rehabilitation works on the RPSP in 2010 and 2011, the Project Management Unit of the RPSDP awarded 2 contracts during the month of June. SLRA advised the PCU and contractors that only limited clearing works could be done in June, July and August. The contractors and the PCU were advised to adjust the work programmes to accommodate for earthworks which can only be done towards the end of the raining season and during the dry season. Consequently, time extensions were given and earthworks were undertaken during the dry season.

2.1.2 Payment made to contractors for incomplete rehabilitation of feeder roads

All payments made to contractors are for completed works only; not for completed contract. At the beginning of the contract, an advance payment is made to the contractor which is recouped during the course of the contract. At the end of the month or so, an interim payment certificate is raised for works completed and payment is processed and effected.

There were 2 roads in the Bombali District funded under the Rural and Private Sector Development Project. On these roads, culverts were allegedly paid for in full but all the culvert rings were not installed.

Normally, for concrete pipe culvert works, there is a separate bill item for the casting of culvert rings which will be paid for when the culverts are cast or delivered on site. There is another bill item for the installation of pipe culverts. Therefore, if the pipe culvert rings are cast and delivered on site, they will be paid accordingly. Final payments will only be made after the pipes are installed and the approaches backfilled.

However, SLRA considers the allegation for the payment for uncompleted works and will look into the 2 cases brought forward for the following roads with pipe culvert works in the Bombali District:

- Mononko Junction Futaneh (7 km)
- ii. Makenneh Junction Teko (5.7 km)
- 2.1.3 Termination of the Fullah Town Makama feeder road project in the Bombali District Indeed the project for rehabilitation of Fullah Town - Makama feeder road was terminated by the Bombali District Council, as recommended by the SLRA District Engineer. The contractor's name

was WakaFast Construction and General Merchandise. The Contract was recommended for termination because the contractor defaulted and ignored several warnings to comply with the requirements of the contract. The contractor was hence paid only for works done as measured and verified.

Contracts under the RPSDP phase 1 in the Bombali District were awarded by the Bombali District Council. The decision to re-award the 2 contracts identified above lies with the Project Coordinating Unit of the RPSDP and not SLRA, because they are controllers of the RPSDP funds.

The Project Coordinating Unit for the RPSDP is on the procurement process to re-award all terminated contracts under phase 1.

- 2.1.4 Contract for construction of 3 bridges along the Kombrabai Massiprr Manjehun road The contractor on this road was Jifaco Construction and Road Works and his contact was for the construction of three bridges.
 - Bridge 1 15.3m
 - Bridge 2 11.0m
 - Bridge 3 7.0m

Bridges 1 and 2 were completed according to specification and requirements of the contract. In place of the third bridge, a culvert was constructed. The decision to replace the 7.0m bridge by a culvert was taken by the Project Manager - RPSDP / SLRA District Engineer - Tonkolili District, because the conditions on the ground did not require a bridge but a culvert.

Therefore, Jifaco Construction and Road Works was paid for the two bridges constructed. He however did not properly backfill the 4 approaches to the 2 bridges, hence, his retention was withheld by the RPSDP pending completion of the approaches to the 2 bridges.

In response to the alleged report that out of 3 bridges only 1 was constructed, we wish to confirm that 2 out of 3 bridges were constructed and a culvert was constructed in the place of the third bridge. We further wish to inform you that the culvert's valued was lesser than the bridge. Hence, the culvert was paid for according to its lesser value. Payments were certified as follows:

Bridge 1 done and paid for, Bridge 2 - done and paid for; and Culvert - done and paid for.

SLRA, together with the PCU of the RPSDP and the Ministry of Agriculture, Forestry and Food Security will follow-up on the outstanding backfilling activities on this contract.

2.1.5 Rehabilitation of the Blama - Ngogebu feeder road - Lot 8a - Bo District

The contractor for rehabilitation of this road section was Sam King Services. As part of the requirements under this contract, the contractor was supposed to undertake 0.1 km section of rock excavation. The rocky and hilly section of the Blama - Ngogebu road actually requires 1.5 km section of rock excavation. Therefore, the rocky section increased by approximately 750%.

An approval was requested from the World Bank for additional works and variation, which has been given. The Bo District Council, the PCU and Project Manager SLRA/RPSDP are working with the all stakeholders in order to get the Contractor to undertake the additional works for the rocky section.

2.1.6 Guardrails for bridge on the Njala - Kpamanjama feeder road - Bo District

As stated in your report, indeed the bridge on the Njala - Kpamanjama road has no guard rails. This is simply because it was not part of the design and hence no bill item was identified for it. The design for all bridges require guardrails but because of budgetary constraints, most projects do not include costs for small bridges guardrails for feeder roads in Sierra Leone. However, SLRA will include the fabrication and installation of guardrails for the three classes of feeder roads in future, and emphasize to projects to accept at as the minimum standards.

2.2 Agriculture Sector Development Project (ASREP)

The ASREP project is funded by a loan to the Government of Sierra Leone from the African Development Bank (ADB), which is geared towards developing the agricultural sector by construction of Farmers Fased Organisations (FBOs) centers. The project is primarily an agricultural development project but it has a road component for the rehabilitation of feeder roads in the Kambia, Port Loko, Moyamba, Pujehun and Kenema Districts, in order to link communities with FBOs to those without FBOs.

The project duration is 3 years from 2010 - 2013.

2.2.1 Rehabilitation of Panguma - DFO Compound Lot 3 (Kenema District)

Under the ASREP, a contract was awarded to Kots Integrated Services for the rehabilitation of Panguma - DFO Compound road and the construction of culverts - Kenema District. The structure identified in your report is a SINGLE BOX CULVERT and not a BRIDGE.

This contract is ongoing but payments have been made for works completed so far. All substandard works on this contract have not been paid for as alleged in your report. The contract value is Le 945,612,630.00 but only Le 306,468,491.80 has been paid to date. The amount of Le 189,122,526.00 was the advance payment and not payment for measured work. This amount will

be recouped from subsequent payments until the advance is recovered in full. As at September 2013, a total amount of Le 306,468,491.8 was paid to the contractor for measured works, which is equivalent to 32% of the contract sum.

The situation of the contract has changed for the better since the time of your site visit in May 2013; as at November 2013 the certified works accomplished is approximately 50%. Although the contractor is still behind schedule, he has been warned accordingly. It is hoped that the contract will be completed by the end of the contract duration which was extended.

2.2.2 Unacceptable materials used to backfill culverts / works as per Technical Specifications - ASREP

A contract was awarded in May 2011 to K. K. Kargbo Enterprise to rehabilitate 10.6 km of the Makump - Kangbatama road. This contract was supposed to be completed in December 2011 and was due for Routine Maintenance immediately after reconstruction.

Culvert approaches are backfilled with approved material during rehabilitation. This contractor had an extension to his contract up to December 2013. He however failed to maintain his culvert approaches after the rains of 2012 and 2013. Hence, the constructed culvert approaches were washed off as shown in your photographs. Drivers and commuters then fill these gaps with logs or any material to provide a passage at the location.

The situation has changed for the better since the time of your visit which was May 2013. Following instruction from the SLRA Engineer on the project, all culverts approaches on the Makump - Kangbatama road have been properly backfilled and compacted.

2.3 Culvert offshoots

It is standard practice that all culverts should have clear drainages to collect and discharge water without infringement. Therefore, for culvert construction it is part of the technical specifications to construct an offshoot at the inlet and outlet, and to clear the culvert tunnel from all detritus.

The contract to rehabilitate the Masimera - Malelebe road included construction of culverts. The contractor was not considered to have completed his culvert work when the culverts were not functional. SLRA was aware of the situation of culverts offshoots and pursued the matter. The Contractor was directed to complete his obligations under the contract. The report reaching us on the situation is that the offshoots have been constructed now and this contractor has almost completed his work as per the technical specifications.

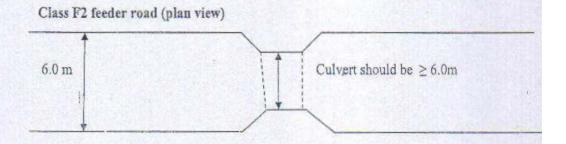
SLRA values the road users' views but we are wary of the fact that most lay people in road works may not be in a position to determine the required dept for culvert excavation. Hence, their views

about excavation depths for culverts will be taken in to account but SLRA will have to refer to the drawings and technical specification.

Furthermore, the number of pipe culvert rings will vary depending on the length of individual culvert rings and the class of feeder road for which it should be used. For example, if a class F2 feeder road which is 6m wide, and the culvert rings are 1m long, then a contractor will require at least 6 culvert rings to use on the 6.0m F2 feeder road. On the other hand, it if a class F2 feeder road was being constructed and the culvert rings are 0.6m long, then a contractor will require to install at least 10 culvert rings for the 6.0m wide F2 feeder road. The same implication will apply for class F1 and class F3 feeder roads.

However, since the road under scrutiny is a class F2 then the issue should be that we do not have a bottle neck as illustrated below.

Figure 2: Plan view of class F2 Feeder road (Culvert should be at least 6.0 long)



unacceptable bottle neck created

The case in relation to the contract with K. K. Kargbo Enterprise for the rehabilitation of Makump - Kanhbatama feeder road will be investigated to ascertain that the contractor has not created a bottleneck. (Appropriate action will be taken).

2.4 Wingwalls for culverts - RPSDP

The technical specifications for pipe and box culverts require the construction of wingwalls to hold back suitable backfilling material. In the case of culverts installed along embankments, the wingwalls will hold back the material used to build up the embankment.

The case in question may be an isolated case which will be investigated. SLRA does not tolerate contractors to default in meeting the technical requirements for culverts, bridges and the road in general. If this allegation is true, appropriate action will be taken to address the situation.

2.5 Unavailability of an all-inclusive technical standard for rural feeder roads (NRFRP)

The Sierra Leone Roads Authority represented by the Department of Feeder Roads, conceptualized the idea of the National Rural Feeder Roads Policy and also pioneered its development. Therefore SLRA is naturally committed to this document and also in the fore front to get other MDA to adhere to the NRFRP.

The NRFRP was launched in May 2011. Works under the Rural and Private Sector Development Project Phase 1 were awarded in 2010. Clearly these works under the RPSDP were awarded before the NRFRP was launched. Therefore, the different classes of feeder roads were not standardized by then.

The culvert approaches are backfilled with approved material during rehabilitation. Routine maintenance activities should follow immediately at the end of the defect liability period. When this is not done and the road is allowed to pass through one rainy season, the constructed culvert approaches are washed off as the photographs show. Drivers and commuters then fill these gaps with logs or any material to provide a passage at the location.

2.6 Updated National Feeder Road Inventory and Road Condition Survey

It is true that SLRA does not have an updated inventory of all feeder roads in Sierra Leone, which can be collected by undertaking a thorough road inventory and road condition survey. Even the most developed countries in the world do not have a complete road inventory. There are approximately 4,152 km of feeder roads in Sierra Leone. SLRA wishes to put together an updated road inventory but funding constraints does not permit us. Feeder roads inventory can be found in SLRA for all projects undertaken since the inception of SLRA. But gravel and earth roads are unlike other roads - their conditions change rapidly. Therefore, road inventory should be an ongoing process which renders the cost of developing an updated inventory to be even higher. SLRA however has inventory of roads that have been rehabilitated over the years.

Furthermore, SLRA considers all structures (culverts, side drains, bridges, drifts, etc) as important, hence the damaged structures are always considered in upcoming projects for rehabilitation and maintenance. All projects are constrained by budget. For Spot Improvement projects, only the critical or worst sections and/or crossings are considered. However, some structures may be sound during project inspection and project preparation. The reality is that some structures may be damaged by traffic or otherwise after the project ends. As stated in the National Rural Feeder roads Policy, the damaged culverts, bridges and deteriorated feeder roads in the feeder roads

network contribute to the 1,195 km and 1,577 km of feeder roads in fair and poor conditions respectively.

With availability of more funds, most of the damaged structures and roads can be upgraded to the good condition category.

2.7 Collaboration and Coordination of Stakeholders on Feeder Road Works

There is a serious challenge to bring all feeder roads projects under the auspices of the Feeder Roads Department at SLRA. As you rightly found out, some development partners undertake reconstruction and maintenance of feeder roads without our knowledge. There is a serious risk of doing substandard works when the SLRA is not involved to ensure that our standards are met.

Notwithstanding that, SLRA is working hard and explaining to other stakeholders about the benefits to be realized in terms of quality and value for money.

In terms of technical support to the Local Councils, SLRA has made one District Engineer available in every District to give technical support to Local Council. The Council Works Engineers are expected to understudy the SLRA District Engineers when roads are concerned. This support has been tapped in the past by many Local Councils.

Local District Councils are always involved in identification, planning, execution and monitoring of feeder roads construction, rehabilitation and maintenance. However, the Councils' level of involvement may differ from project to project. In the Rural and Private Sector Project and the Agricultural Sector Project, for example, the primary objectives are to develop Farmer Based Organisations in different agricultural communities. These communities are identified before the roads come in, to connect or link such communities. Therefore, in these circumstances, the roads will be obvious and are chosen by the Project Coordinating Units of line Ministry, but in collaboration with the Councils. SLRA comes in to make sure that the roads link up other rehabilitated project roads and enhance connectivity to the bigger feeder roads grid.

In other donor projects, the initial identification of feeder roads for rehabilitation comes from the council entirely. Like for all feeder roads projects, SLRA comes in to make sure that the roads link up other rehabilitated project roads and enhance connectivity to the bigger feeder roads grid.

The final short list compilation of the feeder roads for rehabilitation is done by the steering committee of the National Rural Feeder Roads, which is composed of the following:

- Ministry of Works Housing & Infrastructure Chairman
- Ministry of Finance & Economic Development Member
- Sierra Leone Roads Authority Member

- · Ministry of Agriculture, Forestry & Food security Member
- · Ministry of Local Government and Rural Development Member
- · Chairman, Association of Local Council Chairmen Member

The last 2 members of the steering committee adequately represent the Local councils at the final level of feeder roads selection.

2.8 Safety measures not implemented and no axle load control for feeder roads Road safety has always been a priority for SLRA. Road safety issues are always included in the planning and development of feeder roads. We always include the provision of first aid kits, warning signs, occupational health and safety, etc.

However, all projects are constrained by budget; some are constrained severely whilst others are better off. Although SLRA recommends the provision of traffic signs for all feeder roads rehabilitation projects, the budget of some projects cannot accommodate every recommendation. As a result some projects leave out the installation of traffic signs.

SLRA strongly recommends the inclusion of safety issues in all its design and expects the development partners to abide by them.

Axle load should be controlled on all roads. Feeder roads will deteriorate rapidly if heavier than specified axle loads ply them. This is the reason why SLRA recommended the inclusion of axle load control in the National Rural Feeder Roads Policy. The situation in Sierra Leone is that there are no mechanisms to control axle roads on our feeder roads. As a matter of fact, there are only one or two weighbridges on the trunk roads in Sierra Leone.

SLRA, SLRTA and the Ministry of Transport and Aviation are preparing a project to be funded by the World Bank, for control of axle loads. SLRA will recommend the extension of this project to include axle load control on feeder roads.

2.9 Maintenance of feeder roads

In accordance with the Local Government Act (2004), the maintenance of feeder roads and community roads lies with the Local District Councils. SLRA has District engineers in all 13 Districts in Sierra Leone. They are providing technical backstopping for the Local District Councils for maintenance of feeder roads.

The Road Maintenance Fund Administration should provide 20% of the Roads Fund for feeder roads maintenance. Therefore the respective District Councils will be in a better position to report on the management of maintenance funds received from the RMFA.

The IDA had an agreement with the Government of Sierra Leone to help fund the maintenance of feeder roads rehabilitated under phase 1 of the Rural and Private sector Development Project (RPSDP). For the first maintenance cycle / year, the RPSDP was to provide the 70% of the cost involved, while the Government of Sierra Leone was supposed to fund 30%. The second year: RPSDP = 30% and GoSL = 70%. However, since the completion of the RPSP - phase 1 in 2011, no maintenance works were undertaken on the roads, so the roads deteriorated having gone through 2 raining seasons.

SLRA, the RPSDP and the District Councils see this as a serious concern. The SLRA, the Local Councils and the Project Coordinating Unit of the Rural and Private Sector Development Project intend to undertake the maintenance of rehabilitated RPSDP phase 1 feeder roads in 2014.

3.00 Conclusion

SLRA appreciates the efforts made by the Auditor General's Office to investigate our feeder roads activities in the best interest of the country. SLRA also welcomes other Ministries, Departments and Agencies for their involvement in feeder roads development. We however, would prefer a well coordinated response to feeder roads rehabilitation and maintenance in order to give our feeder roads the appropriate standards and also to achieve value for money.

We are doing our best in the prevailing circumstances to perform our obligations in ensuring that our roads and feeder roads in this case are well developed. We also expect the Road Maintenance Fund Administration (RMFA) and the District Councils to make adequate arrangements to better coordinate the funding for maintenance of feeder roads in Sierra Leone.

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