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**Report No.: 29308**

# PROJECT PERFORMANCE ASSESSMENT REPORT

## REPUBLIC OF SIERRA LEONE

## ROADS REHABILITATION AND MAINTENANCE PROJECT
## (CREDIT 2451-SL)

## FREETOWN INFRASTRUCTURE REHABILITATION PROJECT
## (CREDIT 2511-SL)

**June 8, 2004**

*Sector and Thematic Evaluation Group*
*Operations Evaluation Department*

## Currency Equivalents (annual average official rate)

*Currency Unit =Sierra Leonean Leones (SLL)*

| Average for: | US$1.00 = SLL | Average for: | US$1.00 = SLL |
|---|---|---|---|
| 1992 | 499.08 | 1998 | 1564.67 |
| 1993 | 567.33 | 1999 | 1820.38 |
| 1994 | 586.54 | 2000 | 2098.71 |
| 1995 | 753.94 | 2001 | 1985.19 |
| 1996 | 920.75 | 2002 | 2050.00 |
| 1997 | 981.91 | 2003 | 2275.40 |

## Abbreviations and Acronyms

| | |
|---|---|
| AFRC | Armed Forces Revolutionary Council |
| DOHSS | Department of Health and Social Services |
| ECOMOG | ECOWAS Military Observer Group |
| ECOWAS | Economic Community of West African States |
| ERR | economic rate of return |
| ES | Evaluation Summary |
| FCC | Freetown City Council |
| GOSL | Government of Sierra Leone |
| GVWC | Guma Valley Water Company |
| ICR | Implementation Completion Report |
| I-PRSP | Interim Poverty Reduction Strategy Paper |
| IDA | International Development Association |
| NPRC | National Provisional Ruling Council |
| OED | Operations Evaluation Department |
| OP | (Bank) Operational Policy |
| PCMU | Project Coordination and Management Unit |
| PPAR | Project Performance Assessment Report |
| RUF | Revolutionary United Front |
| SAR | Staff Appraisal Report |
| SDR | Special Drawing Rights |
| SIPRI | Stockholm International Peace Research Institute |
| SLPP | Sierra Leone People's Party |
| SLRA | Sierra Leone Roads Authority |
| TSS | Transitional Support Strategy |
| UNAMSIL | United Nations Mission in Sierra Leone |
| vpd | vehicles per day |

## Fiscal Year

Government: January 1 – December 31

| | | |
|---|---|---|
| Director-General, Operations Evaluation | : | Mr. Gregory K. Ingram |
| Director, Operations Evaluation Department | : | Mr. Ajay Chhibber |
| Manager, Sector and Thematic Evaluation | : | Mr. Alain Barbu |
| Task Manager | : | Mr. Roy Gilbert |

**OED Mission: Enhancing development effectiveness through excellence and independence in evaluation.**

**About this Report**

The Operations Evaluation Department assesses the programs and activities of the World Bank for two purposes: first, to ensure the integrity of the Bank's self-evaluation process and to verify that the Bank's work is producing the expected results, and second, to help develop improved directions, policies, and procedures through the dissemination of lessons drawn from experience. As part of this work, OED annually assesses about 25 percent of the Bank's lending operations. In selecting operations for assessment, preference is given to those that are innovative, large, or complex; those that are relevant to upcoming studies or country evaluations; those for which Executive Directors or Bank management have requested assessments; and those that are likely to generate important lessons. The projects, topics, and analytical approaches selected for assessment support larger evaluation studies.

A Project Performance Assessment Report (PPAR) is based on a review of the Implementation Completion Report (a self-evaluation by the responsible Bank department) and fieldwork conducted by OED. To prepare PPARs, OED staff examine project files and other documents, interview operational staff, and in most cases visit the borrowing country for onsite discussions with project staff and beneficiaries. The PPAR thereby seeks to validate and augment the information provided in the ICR, as well as examine issues of special interest to broader OED studies.

Each PPAR is subject to a peer review process and OED management approval. Once cleared internally, the PPAR is reviewed by the responsible Bank department and amended as necessary. The completed PPAR is then sent to the borrower for review; the borrowers' comments are attached to the document that is sent to the Bank's Board of Executive Directors. After an assessment report has been sent to the Board, it is disclosed to the public.

**About the OED Rating System**

The time-tested evaluation methods used by OED are suited to the broad range of the World Bank's work. The methods offer both rigor and a necessary level of flexibility to adapt to lending instrument, project design, or sectoral approach. OED evaluators all apply the same basic method to arrive at their project ratings. Following is the definition and rating scale used for each evaluation criterion (more information is available on the OED website: http://worldbank.org/oed/eta-mainpage.html).

***Relevance of Objectives:*** The extent to which the project's objectives are consistent with the country's current development priorities and with current Bank country and sectoral assistance strategies and corporate goals (expressed in Poverty Reduction Strategy Papers, Country Assistance Strategies, Sector Strategy Papers, Operational Policies). *Possible ratings:* High, Substantial, Modest, Negligible.

***Efficacy:*** The extent to which the project's objectives were achieved, or expected to be achieved, taking into account their relative importance. *Possible ratings:* High, Substantial, Modest, Negligible.

***Efficiency:*** The extent to which the project achieved, or is expected to achieve, a return higher than the opportunity cost of capital and benefits at least cost compared to alternatives. *Possible ratings:* High, Substantial, Modest, Negligible. This rating is not generally applied to adjustment operations.

***Sustainability:*** The resilience to risk of net benefits flows over time. *Possible ratings:* Highly Likely, Likely, Unlikely, Highly Unlikely, Not Evaluable.

***Institutional Development Impact:*** The extent to which a project improves the ability of a country or region to make more efficient, equitable and sustainable use of its human, financial, and natural resources through: (a) better definition, stability, transparency, enforceability, and predictability of institutional arrangements and/or (b) better alignment of the mission and capacity of an organization with its mandate, which derives from these institutional arrangements. Institutional Development Impact includes both intended and unintended effects of a project. *Possible ratings:* High, Substantial, Modest, Negligible.

***Outcome:*** The extent to which the project's major relevant objectives were achieved, or are expected to be achieved, efficiently. *Possible ratings:* Highly Satisfactory, Satisfactory, Moderately Satisfactory, Moderately Unsatisfactory, Unsatisfactory, Highly Unsatisfactory.

***Bank Performance:*** The extent to which services provided by the Bank ensured quality at entry and supported implementation through appropriate supervision (including ensuring adequate transition arrangements for regular operation of the project). *Possible ratings:* Highly Satisfactory, Satisfactory, Unsatisfactory, Highly Unsatisfactory.

***Borrower Performance:*** The extent to which the borrower assumed ownership and responsibility to ensure quality of preparation and implementation, and complied with covenants and agreements, towards the achievement of development objectives and sustainability. Possible ratings: Highly Satisfactory, Satisfactory, Unsatisfactory, Highly Unsatisfactory.

# Contents



This report was prepared by Nilakshi De Silva (Consultant) who visited Sierra Leone during November-December 2003. The report was edited by William B. Hurlbut and Romayne Pereira provided administrative support.

# Principal Ratings

### *Roads Rehabilitation and Maintenance Project (Cr.2451)*

| | *ICR** | *ICR Review** | *PPAR* |
|---|---|---|---|
| Outcome | Satisfactory | Moderately Satisfactory | Moderately Unsatisfactory |
| Sustainability | Likely | Unlikely | Likely |
| Institutional Development Impact | High | Substantial | Substantial |
| Bank Performance | Satisfactory | Satisfactory | Satisfactory |
| Borrower Performance | Satisfactory | Satisfactory | Satisfactory |

### *Freetown Infrastructure Rehabilitation Project (Cr.2511)*

| | *ICR** | *ICR Review** | *PPAR* |
|---|---|---|---|
| Outcome | Satisfactory | Satisfactory | Moderately Satisfactory |
| Sustainability | Likely | Likely | Unlikely |
| Institutional Development Impact | Modest | Modest | Modest |
| Bank Performance | Satisfactory | Satisfactory | Satisfactory |
| Borrower Performance | Satisfactory | Satisfactory | Satisfactory |

* The Implementation Completion Report (ICR) is a self-evaluation by the responsible operational division of the Bank. The ICR Review is an intermediate OED product that seeks to independently verify the findings of the ICR.

# Key Staff Responsible

### *Roads Rehabilitation and Maintenance Project (Cr.2451)*

| *Project* | *Task Manager/Leader* | *Division Chief/ Sector Director* | *Country Director* |
|---|---|---|---|
| Appraisal | Thampil Pankaj | James Wright | Edwin Lim |
| Completion | Zaza Manitranja Ramandimbiarison | Maryvonne Plessis-Fraissard | Peter C. Harrold |

### *Freetown Infrastructure Rehabilitation Project (Cr.2511)*

| *Project* | *Task Manager/Leader* | *Division Chief/ Sector Director* | *Country Director* |
|---|---|---|---|
| Appraisal | Nguyen Tin | James Wright | Edwin Lim |
| Completion | Charles K. Boakye | Letitia A. Obeng | Peter C. Harrold |

# Preface

This is the Project Performance Assessment Report (PPAR) for the following two projects in Sierra Leone:

- ***The Roads Rehabilitation and Maintenance project*** (Credit 2451-SL), for which the World Bank approved a credit of SDR 32 million (US$45 million equivalent) on December 22, 1992. The credit was closed on June 30, 2001, three years later than planned, and SDR 2.0 million (US$2.4 million equivalent) was cancelled.

- ***The Freetown Infrastructure Rehabilitation project*** (Credit 2511-SL), for which the Bank approved a credit of SDR 18.4 million (US$26 million equivalent) on June 10, 1993. The credit was closed on June 30, 2001, three years later than planned, and SDR 0.5 million (US$0.7 million equivalent) was cancelled.

This report is based on review of project documents, such as Implementation Completion Reports, Staff Appraisal Reports, Technical Annexes, legal documents and project files, discussions with Bank staff involved in the projects and a field assessment. An OED mission visited Sierra Leone during November-December 2003 to review project results and met with over 30 officials of central and local government, parastatal agencies responsible for project implementation, nongovernmental organizations, and other donors. Field visits were carried out to project sites in Freetown and the provinces, where the mission met with intended beneficiaries of the project. We gratefully acknowledge the courtesies and attention given by all these interlocutors as well as the excellent logistical assistance provided by the World Bank office in Freetown and the Project Coordination and Monitoring Unit (PCMU) in the Ministry of Transport and Communications.

Following standard procedures, copies of the PPAR were sent to relevant government officials and agencies concerned for comments but none were received.

# Summary

Sierra Leone, just emerging from a prolonged and violent conflict, is one of the poorest countries in the world and its development needs are staggering. In addition to the devastating conflict, the country has experienced many years of insecurity and political instability – which, together, have destroyed the national economy and worsened the conditions facing the poor. The two projects assessed in this report were identified and appraised in the early 1990s, before the conflict had become a significant threat to national security. The violence spread and increased in intensity during project implementation and disbursements on both projects were disrupted for many months in 1997-1998. The difficult circumstances in which these two projects were implemented and how they have affected project performance is an important focus of this report.

**The Roads Rehabilitation and Maintenance project** had six objectives but mainly aimed to remove physical bottlenecks in the country's transport network through an extensive road reconstruction and rehabilitation program, build capacity to better plan and manage road maintenance, and encourage private sector participation in road maintenance. The project achieved some of its objectives but with significant shortcomings. Planned works in Freetown were completed and city roads, particularly in the central business district, have improved. In contrast, the project has had negligible impact in the provinces as project activities were curtailed after a direct rebel attack on the project implementation site. More success was achieved in building institutional capacity in the transport sector as the Sierra Leone Roads Authority (SLRA) is now better able to plan and manage road network maintenance. Private sector participation in road maintenance, non-existent before the project, has increased and road maintenance work provides employment to about 50 small and medium contractors as well as over 500 single-person contractors**.** Despite these achievements, the *overall outcome* is rated as **moderately unsatisfactory** because co-financing (projected at appraisal to meet 40 percent of project costs) failed to materialize and only 7 percent of planned road works were completed. *Sustainability* of project benefits is **likely** given the existence of the Road Fund that provides earmarked financing for road maintenance. The *institutional development impact* is rated as **substantial** as the management of road maintenance improved considerably under the SLRA. Despite poor identification and assessment of project risks, *Bank performance* is rated as **satisfactory** because of supervision efforts to maintain contact with implementing agencies throughout the conflict, which helped to secure the positive outcomes of the project. *Borrower performance* is rated as **satisfactory** mainly because it achieved significant reforms in financing road maintenance under very difficult circumstances.

**The Freetown Infrastructure Rehabilitation project** aimed to improve infrastructure in Greater Freetown, with particular regard to the needs of the urban poor, and strengthen the capacity of responsible agencies. The project has improved living conditions in six deprived settlements, which now have better roads, market structures, and access to safe water, although solid waste management remains a problem. The project was less successful in improving institutional capacity for service delivery in the city. Despite some improvement in the financial performance of the Guma Valley Water Company (GVWC), the agency responsible for water supply in Freetown, both the GVWC and the Freetown City Council continue to have weak capacity and lack of proper

maintenance is threatening the continued use of the new facilities. Because the project achieved its objective of improving infrastructure in Freetown but was less successful in strengthening the capacities of agencies responsible for its delivery, *overall outcome* is rated as **moderately satisfactory**. *Sustainability* of project benefits is **unlikely** because the infrastructure is not maintained adequately and some facilities are already falling into disuse. The *institutional development impact* is **modest,** mainly because the City Council, which is responsible for most of the new facilities, remains as administratively and operationally weak as before. *Bank performance* is **satisfactory** due to good quality at entry and supervision and *Borrower performance* is also rated as **satisfactory**, mainly because of the performance of implementing units within the SLRA and GVWC in safeguarding project achievements despite extreme conditions imposed by the conflict.

The main lessons drawn from these project experiences are:

- Projects implemented in countries with an ongoing conflict need to be continually monitored to identify and assess the conflict risk to the projects. When continuing project implementation under high-risk conditions is likely to prove counterproductive, by exposing the Bank and the Borrower to compensation and other claims, the Bank might consider disengagement until the environment improves.

- When project implementation is resumed after a substantial period of inactivity due to conflict, technical and financial audits should be carried out to reassess priorities for action as well as and any remedial measures needed to secure completed activities.

- When a country is in, or emerging from conflict, the Bank may need to adopt a more flexible approach to borrower compliance with reform-related loan covenants. A realistic timeframe should be agreed when attempting to introduce unpopular reforms in the context of violence and social instability.

Gregory K. Ingram
Director-General
Operations Evaluation

# 1. Background

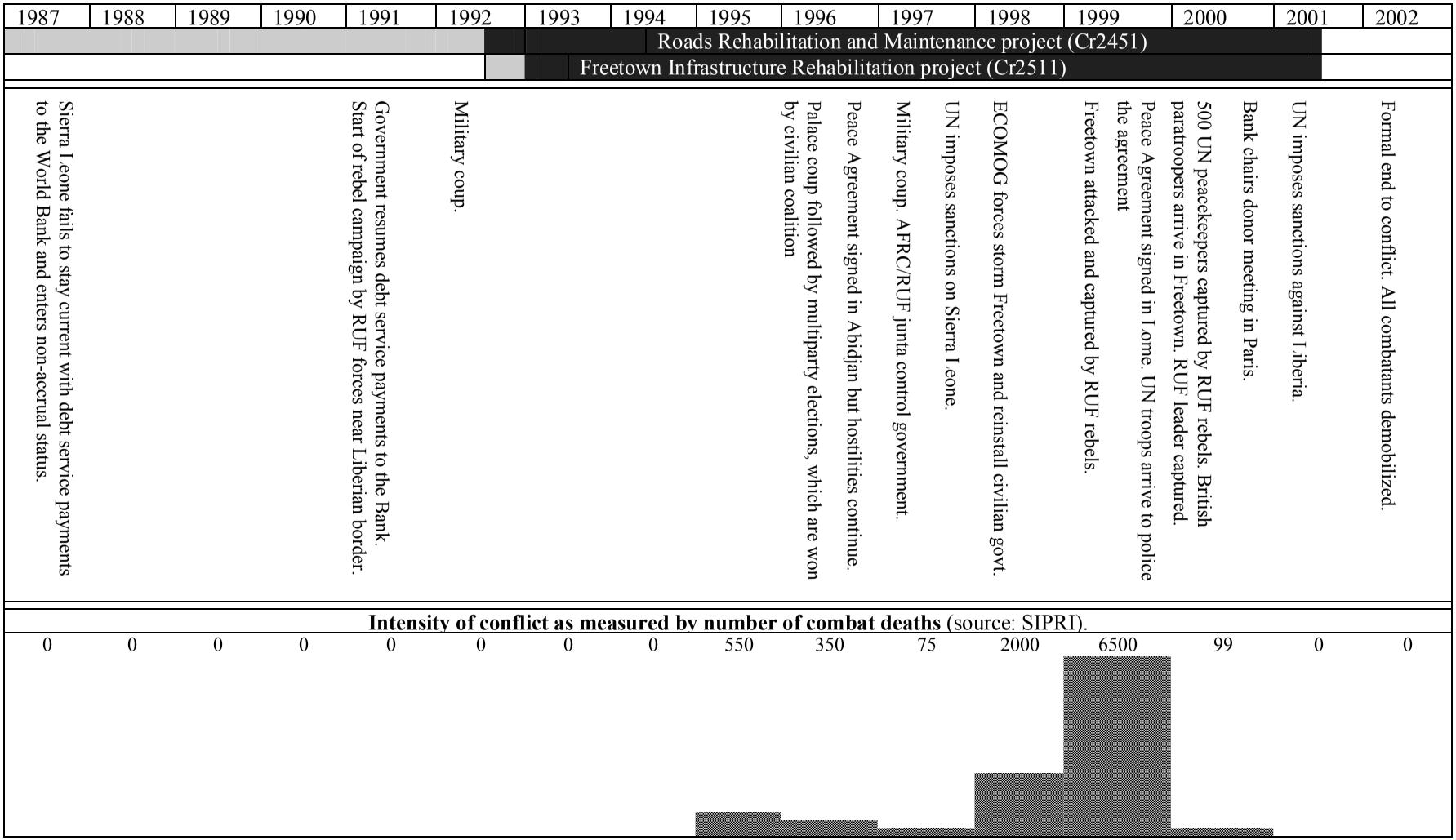
1.1 During the past decade, Sierra Leone has experienced a devastating conflict and long periods of insecurity and political instability. More than 20,000 — mostly civilians — are estimated to have died, many thousands maimed, and about half its population of five million displaced. In 1992, per capita income was just over US$240, one of the lowest in the world. Since then, however, it has declined every year, except in 1996 when the economy rallied briefly, and by 2002 Sierra Leone was recording a per capita income of about US$165, the fifth lowest in the world (World Development Indicators, 2003). In tandem with the economic decline, social indicators have also deteriorated over the past decade. Less than 60 percent of Sierra Leonians have access to improved supplies of water and basic sanitation, child mortality is estimated to be 182/1000 births, and life expectancy at birth is under 35 years (Human Development Indicators, 2003). The country's development needs are staggering and have remained unmet during many years of conflict and instability.

1.2 The population of Sierra Leone is essentially rural. When the last census was carried out in 1985, about 74 percent of the population was living in rural village settlements of less than 20,000 people (Central Statistics Office, 1985). However, many people have migrated into urban areas, especially Freetown, because of failed agricultural policies, many years of poor governance, and deteriorating public institutions with limited capability to deliver even the most basic services. The city of Freetown, the administrative and economic center of the country, is also the best endowed in terms of economic opportunities and social amenities. Much of the economic activity in the country, such as plantation agriculture in the east and diamond mining in the north, is linked to Freetown, which has the country's only international seaport and airport. Development policies adopted during the 1980s and early 1990s focused on Freetown and the Western area, to the neglect of rural areas in the North and East.

1.3 The violent conflict, which began in the early 1990s near the eastern border with Liberia, accelerated urban migration trends and triggered a mass exodus of people toward the West. At the height of the conflict, as many as 2 million or close to 50 percent of the population was estimated to be living in the West — compared to about 15 percent in 1985. Many refugees have still not returned to their villages. The two projects assessed in this report were identified and appraised after the conflict had begun but before it had become a significant threat to national security (See Timeline). The rebellion increased in intensity during the project implementation period and disbursements on both projects were disrupted, together with the rest of the Bank portfolio, when the Armed Forces Revolutionary Council (AFRC) and the Revolutionary United Front (RUF) gained control of the government in May 1997 and anarchy ensued. As may be expected, Bank projects implemented during the conflict period have not performed well with just 40 percent of the projects achieving a satisfactory performance rating. The difficult circumstances in which these two projects were implemented and how they have affected project performance is an important focus of this report.

## Timelines: Projects in relation to Events in Sierra Leone (1987-2002)

project preparation period until approval — project implementation period until closing



# 2. Project Design And Implementation

***Relevance of Project Objectives***

2.1 Despite significant changes in the country since project appraisal, objectives of both projects remain substantially relevant to Sierra Leone's development priorities today. Poor infrastructure remains one of the main challenges to the country's economic development and post-conflict recovery. Both projects proposed to reconstruct, repair, and provide for the maintenance of public infrastructure such as urban and trunk roads, public markets, and urban water supply (see Box 1). The focus on road transport under the Roads Rehabilitation and Maintenance project is particularly relevant for Sierra Leone because, in the absence of a rail system and under-developed air, coastal, and river transport, economic activity is highly dependent on the road network. Improving governance and service delivery through greater involvement of the private sector are also key to the country's development. In the aftermath of the conflict, during which much of the infrastructure in the country was destroyed or neglected and public service delivery seriously deteriorated, objectives that focus on physical reconstruction and capacity building for improved service delivery have become even more relevant to the development priorities of Sierra Leone.

2.2 However, both projects were designed primarily for the benefit of the country's urban population particularly in Freetown. Despite objectives which are national in scope, the Roads Rehabilitation and Maintenance project focused more than 75 percent of resources on rehabilitating first, the trunk roads linking Freetown with provincial towns such as Bo and Kenema and second, city roads in the central business district in Freetown. As its name implies, the Freetown Infrastructure Rehabilitation project is exclusively focused on the capital city. Several decades of Freetown-centered policies and projects, which concentrated power and resources in the city, are now blamed for disenfranchising a large part of the rural population and contributing to the rebellion. Many of those who came to Freetown to escape the conflict have moved into the deprived settlements and slum areas in Freetown. Lack of amenities in their villages, relative to Freetown, may be a factor in their apparent reluctance to leave the city. The government, supported by the Bank, prioritizes the return and reintegration of displaced persons and aims to promote this by investing heavily in the provinces and rural areas. These newer policies have lessened the relevance of both projects and of the Freetown Infrastructure project in particular. However, as the latter project is focused on the urban poor — whose numbers are estimated to have more than doubled between 1992 and 2002 and who continue to live under crowded and unsanitary conditions — project objectives remain substantially relevant for the government's development objective of improving the urban poor's access to market centers and social and economic services.

**Box 1. Project Objectives and Components**

| *Objectives* | *Components* *(with final costs in US$ millions)* |
|---|---|
| **ROADS REHABILITATION AND MAINTENANCE (CR.2451)** | |
| Physical Objectives<br>(i) remove physical bottlenecks in the country's transport network, in order to promote a supply response from the economic recovery program, through a sustainable road rehabilitation and maintenance program;<br>Institutional Objectives<br>(ii) build institutional capacity to better plan and manage repair and maintenance of roads, and promoting a sustainable system for funding road maintenance;<br>(iii) strengthen transport sector institutions to improve sector management, planning and to foster market-oriented policies;<br>Private Sector Development Objectives<br>(iv) encourage new methods of infrastructure rehabilitation and maintenance, using appropriate labor-intensive technology and local resources, in order to increase employment generation and to provide suitable maintenance systems;<br>(v) increase the share of private sector participation in road maintenance and develop the capacity of small-sized contractors to maintain the road network;<br>Other Objectives<br>(vi) promote the use of non-motorized transport to reduce head loading by women and to increase rural mobility, improving transport services available for the rural poor. | (a) trunk road rehabilitation and maintenance (US$35.57);<br>(b) strengthening of road management institutions (US$2.29);<br>(c) support to Department of Works (DOW) (US$0.03);<br>(d) support to transport sector institutions (US$0.08);<br>(e) pilot program for promotion of Non-Motorized Transport (NMT) (US$0.08); and<br>(f) technical assistance for project design and supervision (US$5.10): |
| **FREETOWN INFRASTRUCTURE REHABILITATION (CR.2511)** | |
| (i) improve infrastructure in Greater Freetown, with particular regard to the needs of the disadvantaged poor sectors of the city; and<br><br>(ii) enhance sustainability of such urban infrastructure by improving the technical and financial capacities of agencies responsible for operating and maintaining new urban facilities and for planning and managing future urban infrastructure investment programs. | (a) urban upgrading (US$3.44m);<br>(b) rehabilitation/upgrading of access roads (US$11.22m.);<br>(c) water supply (US$6.86m.);<br>(d) institutional support to Sierra Leone Roads Authority (SLRA) for project implementation and to Freetown City Council (FCC) to help establish a maintenance capacity (US$1.17m.); and<br>(e) technical assistance (US$4.76m.). |

***Conflict Constraints on Project Design and Implementation***

2.3 The conflict and political instability in Sierra Leone disrupted project implementation and project efficiency in particular was adversely affected. From May 1997 through 1999, there was an almost-complete breakdown of government. Disbursements on the entire country portfolio stopped and all project activities came to a complete standstill. Some project inputs, such as aggregate for road reconstruction, and some outputs, such as partially completed civil works, were left unprotected and were destroyed by several seasons of heavy rains. Project equipment, especially vehicles, was stolen or damaged and project buildings were vandalized. As a result, project resources had to be diverted toward salvaging components that had been partially completed before the disruptions. Both projects therefore had to spend more than planned to achieve fewer outputs. For example, despite 40 percent cost overrun on the road component under the Freetown Infrastructure Rehabilitation project, expenditures did not cover road repairs in two out of the six deprived areas. Also, more than 1,000 domestic water meters installed by the Guma Valley Water Company (GVWC) under the project were illegally removed during the chaos and had to be reinstalled. Under the Roads Rehabilitation and Maintenance project, close to 20 percent of final project costs was paid to contractors as compensation for conflict losses. As the conflict interrupted implementation, its impact on these two projects is largely manifested as efficiency losses.

2.4 However, project efficiency and efficacy were also affected by factors unrelated to the conflict. The conflict is blamed for failure of the non-motorized transport component under the Roads Rehabilitation and Maintenance project because the locations originally selected for piloting this component became inaccessible due to the conflict. However, this component — with a design too rigidly based on Bank experience elsewhere and without sufficient input from intended beneficiaries in Sierra Leone — may have performed poorly even if implemented exactly according to plan. Similarly, vandalization of the SLRA building and loss of documents is blamed for non-implementation of five major studies carried out under the Freetown Infrastructure Rehabilitation project when the reports were in fact completed but are just gathering dust in Freetown. There is a tendency on the part of both Bank and borrower staff to attribute poor project results to the conflict but, while the extreme conditions undoubtedly affected project performance, good project design and implementation arrangements may have improved project outcomes — despite the conflict.

2.5 While the implementation of both projects was severely disrupted by the conflict, neither was designed with much reference to the conflict. The projects were still being appraised in 1992-1993, at least one year after rebel activity had started in the east, but neither project's appraisal document discusses the conflict as a potential project risk. While this may be excused in the case of the Freetown Infrastructure project, which was to be implemented more than 450 kilometers away from the conflict area at the time, it is less so in the Roads Rehabilitation and Maintenance project, which proposed to carry out road reconstruction as far east as Kenema, close to rebel activity. The failure to even identify the conflict as a potential risk – let alone incorporate measures to mitigate the risk – has cost the borrower heavily. Over US$8 million in project funds had to be used to pay compensation to the foreign contractors. The government is left with the liability to

repay the credit to the Bank – but with no road. The experience of the Roads Rehabilitation and Maintenance project suggests that big road reconstruction contracts with very large inputs of workers and materials should be monitored continually with respect to security risks in or near conflict zones.

***Project Design, Supervision and Bank Performance***

2.6 While the adverse conditions in Sierra Leone affected both projects' results, there are important differences in the performance of each project, which may be explained by reference to the quality of Bank performance. The Freetown Infrastructure Rehabilitation project was well designed because the project concept was simple — providing basic infrastructure such as roads and water supply — and there was a clear poverty focus — six disadvantaged neighborhoods in Freetown were selected for project implementation. The project design took account of limited capacity within the Freetown City Council (FCC) to implement the project by itself. However, as the FCC was to be the final beneficiary of the infrastructure, project design should have been more proactive in remedying this limitation in capacity. In contrast to the Freetown Infrastructure project, which was prepared in less than six months, the Roads Rehabilitation and Maintenance project was prepared over a five-year period (mainly because Sierra Leone was in non-accrual status from August 1987 to January 1991) and was more ambitious in the number and scope of its objectives. In addition to large-scale civil works, the project also aimed to pilot a program for promoting non-motorized transport in rural areas, which is unrelated to the core objectives and outside of the implementing agency's expertise. Firm commitments were not obtained from co-financiers, who were expected to meet as much as 40 percent of project costs. Nevertheless, as with urban infrastructure projects such as the Freetown Infrastructure project, the Bank has many years of experience in road infrastructure and the core components of the Roads Rehabilitation and Maintenance project were technically well designed. Therefore, the overall quality at entry of both projects is satisfactory.

2.7 The conditions under which these two projects were implemented, in particular from 1997 onwards, were extremely difficult and the Bank expended a great deal of effort to maintain constant supervision and restart project activities interrupted by conflict when conditions stabilized. When Sierra Leone was inaccessible due to the violence engulfing the country, Bank supervision missions met with project staff in neighboring Conakry, Guinea and Abidjan, Côté d'Ivoire. Nevertheless, there were some shortcomings in Bank supervision, particularly in monitoring and reporting. Under the Roads Rehabilitation and Maintenance project, close to two-thirds of total costs were allocated to road reconstruction and rehabilitation with the objective of removing physical bottlenecks in the country's transport network. Yet, when it had become apparent that this main objective was unlikely to be achieved — when co-financiers had withdrawn because of the security situation, the major roads contract was cancelled due to a rebel attack and safety considerations had restricted SLRA's maintenance activities to the western region — Bank supervision missions were still reporting satisfactory implementation progress and achievement of development objectives. None of the project objectives were revised. Key project results were inaccurately reported in the Implementation Completion Report (ICR), which states that 72 kilometers of trunk roads

were rehabilitated, when in fact only 15 kilometers had been completed.[1] Lack of continuity of Bank resources — there were four task team leaders (TTLs) during the first three years of implementation — disrupted supervision quality. However, despite these shortcomings, the Bank did well to maintain supervision efforts through the height of the conflict, which undoubtedly helped to consolidate the positive outcomes to this project.

2.8 While Bank supervision of the Freetown Infrastructure Rehabilitation project was generally satisfactory, there were shortcomings in monitoring. About 80 persons were resettled due to project activities, which is not adequately reported in Bank supervision documents and local project staff did not appear to be aware of Bank policies on Involuntary Resettlement or of OP4.12. The OED mission could not determine conclusively that the project had contravened safeguard policy because of the significant lapse of time since the resettlement and because many of those affected no longer live at the resettled location. Bank supervision was also inadequate to ensure proper reconciliation of project finances with Bank records at the end of the project, particularly as the project was implemented through two implementation units — within the SLRA and GVWC.

***Implementation Units, Sector Reforms and Borrower Performance***

2.9 The borrower was under significant strain during project implementation, but the project implementation units (PIUs) performed well to regroup and complete the projects. When project activities resumed in 1999, technical and financial audits were carried out to determine whether project objectives or components needed to be revised in view of the substantial changes in conditions prevailing in Sierra Leone. The PIUs prioritized activities that were most relevant to the changed conditions and, where necessary, carried out remedial measures to safeguard works/activities already completed. This contributed to securing the positive outcomes of the projects. Finally, while lack of institutional capacity is a major issue for Sierra Leone's development, the PIUs created under these projects were located within larger organizations into which they have been absorbed. This has strengthened local capacity to carry out similar development projects in the country.

2.10 The borrower has also performed well to implement and remain committed to several reforms introduced by the projects, and done so under extremely difficult conditions. The Road Fund for financing road network maintenance was legally constituted in 1989 but only came into effect in 1992 when the SLRA was established and before the Roads Rehabilitation and Maintenance project was implemented. Since then, the government increased the fuel levy sevenfold, providing a stable — if not entirely sufficient — source of funding for road maintenance in Sierra Leone. That this was peacefully achieved is remarkable given the potential for social instability that increasing fuel prices can provoke. Similarly, under the Freetown Infrastructure Rehabilitation project, the GVWC instituted cost recovery through metered billing and a card payment system for public standpipes that are contributing to its positive return on net fixed assets (though less than the 8 percent agreed under the DCA). These reforms

1. However, this PPAR does not take into account the quality of the ICR to assess overall Bank performance.

met with strong — and sometimes violent — public opposition and many water meters were forcibly removed by members of the public. Just before the military coup in 1997, the government intervened to stop installation of water meters by GVWC. Since the return of stability to Sierra Leone, the government has supported GVWC's cost recovery measures. Installation of water meters has resumed and more customers are billed on metered consumption. Similarly, as mentioned above, the government has increased the Road Fund levy on several occasions in the past, but the largest increase was achieved in 2003, after stability had returned to Sierra Leone. The experience of these two projects suggests that pushing through substantial reforms under conflict conditions is not sustainable — or palatable for governments facing social instability on many fronts. A more flexible approach — perhaps adopting a more realistic time frame or a more incremental attitude toward reforms — may provide more sustainable results. As the government was successful in introducing substantial reforms despite the volatile country conditions, the overall borrower performance on both projects is satisfactory.

# 3. Results Achieved

***Roads Rehabilitation and Maintenance Project***

3.1. The project partially achieved its objective of removing physical bottlenecks in the country's transport network, with more success in Freetown than in the provinces. In the central business district in Freetown, 15 kilometers of the main city streets were paved as planned under the project and bottlenecks caused by poor road condition have been reduced. The Clinetown–Wellington road, which links Freetown to the trunk road network, was also rehabilitated under the project and SLRA's preliminary traffic counts indicate a 200-300 percent growth in traffic volumes per day on this stretch since 1991.[2] Traffic flow has also been eased by drainage repairs, which have reduced street flooding during the rainy season and, as many of the city drains are now covered, they are less cluttered and blocked by garbage. However, the full benefit from these improvements — in the form of less congestion in the city — has not been realized due to the large influx of people into the city exacerbated by the poor traffic management system currently in place. The central business district is highly congested and the movement of traffic, while improved, is still very slow, indicating that the reduction in vehicle operating costs envisaged at project appraisal has not been fully realized.

3.2. In the provinces, the impact of the project is negligible. About 357 kilometers of paved roads and 136 kilometers of gravel roads in the main trunk road network were to be rehabilitated but only 15 kilometers, or 3 percent, had in fact been completed under the project. About one-third of these roads have, or are being rehabilitated under separate projects supported by the EU, but the condition of remaining roads has deteriorated further and many of the main paved roads, such as the Makeni–Sefadu road linking Freetown with the diamond mining areas and the Taima–Bo road linking Freetown with Sierra Leone's second-largest city in Bo, now resemble gravel tracks. According to users such as the Road Transport Corporation (RTC), vehicle operating costs are extremely

2. Calculated based on 12-hour vehicle count multiplied by factor of 1.3 for vpd.

high, and breakdowns are a common sight on trunk roads. The improvement in road condition is marginal — 56 percent of the network is still in poor condition compared to 70 percent before the project — and the poor state of the road network continues to pose a serious impediment to economic growth in the country.

3.3. The project contributed to building institutional capacity in the transport sector particularly by helping the SLRA to become fully operational. The SLRA, which took over the road management functions of the Department of Works (DOW), is now better able to plan and manage road maintenance. Road management and administration is now more effective, transparent, and accountable. The SLRA estimates that between 75 and 80 percent of the current road maintenance budget is carried out through private sector contracts, which compares well with the pre-project situation when the DOW carried out 100 percent of road maintenance through force account. The project also provided 266 man-months of domestic and 38 man-months of overseas training for SLRA staff. SLRA is now fully capable of effectively supervising and administering all major civil works contracts and maintenance contracts. Institutional inefficiency has also been reduced. However, there is still much room for improving the functioning and performance of the SLRA — financial reports in particular can be prepared in a more timely manner and maintenance planning can correspond better with the actual work carried out. Operational efficiency and transparency continue to be an issue as the SLRA is both the manager and beneficiary of the Road Fund and uses as much as one-third of the funds collected for its own administrative overheads.

3.4. The project provided some support to transport sector institutions such as the Ministries of Transport & Communications and Works, Housing & Technical Maintenance, but this intervention was too small (less than US$100,000) for the task and has not lead to significant improvements in sector management, planning, or market-oriented policies.

**Project Results - in Numbers**

| | Target | Actual |
|---|---|---|
| Road network condition | | |
| -Good (%) | 50 | 28 |
| -Fair (%) | 30 | 16 |
| -Poor (%) | 20 | 56 |
| Road rehabilitation and reconstruction | | |
| -IDA financed (kms) | 140 | 38 |
| -Co-financing (kms) | 373 | 0[3] |
| Maintenance by private sector (contract) | | |
| -Periodic (%) | 70 | 30 |
| -Routine (labor based) (%) | 90 | 100 |
| -Routine (machine based) (%) | 50 | 50 |
| -Single-person contractors employed | 600 | 540 |
| Non-motorized transport | | |
| -bicycle-trailer units distributed | 2500 | 45 |
| -units locally produced | 2200 | 0 |

Sources: SLRA; Transport Statistics Yearbooks

3.5. A key achievement to which the project has contributed is the development of a local contracting industry for road maintenance in Sierra Leone. From none in 1992, there are now about 50 local small and medium-scale contractors, four of whom have recently acquired the capacity to carry out periodic maintenance on paved roads. Routine maintenance work is now largely carried out by the private sector, with 100 percent of labor-based routine

3. The Wellington-Waterloo road (19 kms) was subsequently completed by the EU under a separate, unrelated project.

maintenance done by single-person contractors. It is estimated that there are about 540 single-person contractors and feeder road maintenance is carried out entirely by them. In 2002, the total employment created through road maintenance work is estimated at 380,000 man-days.

3.6. Project benefits are likely to be sustainable, due in large part to the existence of the Road Fund and the Bank's follow-up Transport Sector Project. By supporting the Road Fund, financed by a levy on fuel imports and charges on vehicle registration and licenses, the project contributed to the development of an effective mechanism for funding road maintenance. However, according to the SLRA's analysis, the Road Fund meets less than 60 percent of maintenance needs, even after taking into account the recent 70 percent increase of the fuel levy. While the continuing effective operation of the Road Fund is a remarkable achievement, it will not be sufficient by itself to meet the total needs of a network still in a precarious condition.

3.7. The project also aimed to promote non-motorized transport in the country, but this objective was not achieved. The project intended to provide 2,500 bicycle trailer units but, of the 95 units imported before this component was discontinued, only 45 were actually distributed to the target users. Even of these few units, most are no longer in use due to lack of suitable spare parts. The design of this component was too rigidly based upon Bank experience in Ghana and not sufficiently adapted to the hilly terrain in Sierra Leone.

***Freetown Infrastructure Rehabilitation (FIRP) Project***

3.8. The project contributed to improving infrastructure in Greater Freetown and the urban poor living in six deprived settlements directly benefited from improved conditions such as better roads, market structures, and access to safe water. About 24 kilometers of inner city roads (close to 95 percent of the appraisal target) were rehabilitated, improving road access to these settlements and reducing flooding. However, out of the six, two of the most deprived areas have not benefited to the same extent. More than 90 percent of the road works were carried out in the built-up areas of Brookfields, Congo Market, and Ginger Hall, whereas road repairs planned in the slum areas of Susan's Bay and Mabella were abandoned due to shortage of funds. The all-weather concrete pathway into the interior of Kroo Bay (a marginal residential area consisting mostly of slum dwellings) contrasts sharply with the narrow, highly congested, muddy, and badly deteriorated road surfaces in Susan's Bay and Mabella. Six public ablution facilities and 11 public toilets were also constructed under the project. While the structures themselves are well built, many of these facilities are under-used due to poor maintenance. Most facilities do not have regular supply of water. One ablution facility in Ginger Hall has not had running water in over three years. The public toilets are also under-used, either due to lack of water or because of lack of demand. Some buildings are now used as private storage areas instead of providing a public facility. Overall, the impact of urban upgrading under the project is more substantial in the built-up areas than in the slum neighborhoods.

3.9. Six of the busiest markets in Freetown were upgraded under the project, but except for the Kennedy Street market, market structures are badly designed with little natural light or ventilation. Covered areas in markets at Fisher Street, Smyth Street, and Bombay Street in particular, are sparsely occupied with the entire newly built upper floor

of the Bombay Street market remaining empty. Most market activity takes place in the open air on the streets, under difficult conditions for both sellers and buyers. This invasion of street space adds to traffic congestion in Freetown. A Fourah Bay College survey in 1997 noted a fall in the number of market users over time, a trend confirmed by officials in Freetown. The inappropriate design of these market structures is the most likely reason for this sub-optimal outcome. The better-designed, open-plan Kennedy Street market is fully occupied, in contrast to the low-ceilinged, dark — and sparsely occupied — Smythe Street and Fisher Street markets.

3.10. The project has had little impact on solid waste management in Freetown, which has deteriorated to an alarming degree. The Department of Health and Sanitation Services (DOHSS), which was responsible for solid waste management during project implementation, was provided 50 skip bins and 2 skip loaders under the project to improve waste collection. While this intervention is too small to have had a significant impact on improving waste management in a city of over 1 million residents, any positive effect dissipated in the continuing confusion over who is responsible for waste management in Freetown. Currently, the Ministry of Youth, the DOHSS, the SLRA, and Ministry of Energy and Power each have some responsibility, but the deplorable waste situation, with discarded trash throughout the city, indicates the ineffectiveness of the current arrangements. Two studies were carried out under the project to improve the city's waste management, but none of their recommendations have been implemented. Poor waste management is also undermining gains on other infrastructure, because the environment around markets are highly unsanitary and roads are blocked or flooded because of garbage blocking the drains.

3.11. The FCC is formally responsible for the maintenance of infrastructure constructed under the project, but the project provided little capacity building help to the FCC to fulfill that responsibility. The resulting lack of proper maintenance is threatening the continued use of the facilities. The FCC collects market dues daily from market sellers but market structures are in a poor state of repair and maintenance, water supply is irregular, and solid waste disposal is inadequate. Efforts to create a road maintenance unit within the FCC have absorbed a great deal of resources but, more than two years after the project ended, the unit is yet to become fully operational. Two studies, to provide a structural plan for Greater Freetown and an operational and financial review of FCC, were carried out under the project, but none of their recommendations have been implemented. Until the FCC is willing and capable of providing effective maintenance of public infrastructure in Freetown, and is held accountable for such services, investment in such public infrastructure is unlikely to provide sustainable benefits.

3.12. By constructing 524 public standpipes and extending city coverage by constructing 28 kilometers of pipeline, the project contributed to improving access to safe water supply for the urban poor, who overwhelmingly use public standpipes. GVWC (which is responsible for water supply in Freetown) reports that of the 774 standpipes in the city, between 450 and 500 are functioning at any given time. A government survey found that about 1 million people in the western province, which includes Freetown, had access to safe sources of water by year 2000 (compared to less than 500,000 people in 1985). The project was less successful in improving institutional capacity and management of the GVWC, which has also been supported under the overlapping Urban

Water Supply project (Cr2702). Despite assistance to improve operational and financial performance, only 30 percent of the water supplied to the city is accounted for. There is no universal metering system in place as yet and close to 80 percent of the consumers are billed, not on consumption, but on the rateable value of their property. Water stoppages are still common across the city and a leak detection program under the project has failed to significantly curtail losses.

# 4. Conclusions And Lessons

4.1 ***Road Rehabilitation and Maintenance:*** Project objectives are **substantially relevant** to Sierra Leone's development strategy as rehabilitating road transport infrastructure is essential to the country's economic recovery. However, despite improving the institutional capacity for road maintenance in Sierra Leone, ***efficacy*** in achieving project objectives is rated as **modest** because only 7 percent of planned road works were completed and substantially below-target improvement were achieved in the road network. ***Efficiency*** is also **modest,** mainly because close to 20 percent of final project costs were paid out as compensation to contractors, rather than for completed outputs. Because there are significant shortcomings in project achievements, ***overall outcome*** of the project is rated as **moderately unsatisfactory.** ***Sustainability*** of project benefits is **likely** given the existence of the Road Fund, which provides financing earmarked for road maintenance. The ***institutional development impact*** of the project is rated as **substantial** as the management of road maintenance improved significantly under the SLRA. Despite poor identification and assessment of project risks, ***Bank performance*** is rated as **satisfactory**, mainly because of supervision efforts to maintain contact with implementing agencies throughout the conflict and, post-conflict, helping to secure the positive outcomes of the project. ***Borrower performance*** is rated as **satisfactory,** mainly because it achieved significant reforms in financing road maintenance under very difficult circumstances**.**

4.2 ***Freetown Infrastructure Rehabilitation:*** Despite the geographic focus on Freetown, project objectives are **substantially relevant** to current government and Bank development strategy as they aim to improve access to markets and services for the urban poor. ***Efficacy*** is **modest** because, despite achieving its physical objective, the technical and financial capability of the responsible agencies, particularly the FCC, is still inadequate. ***Efficiency*** of the project is rated as **substantial** mainly because the benefit stream from such infrastructure such as access roads and public standpipes are substantial compared to costs. The ***overall outcome*** of the project is therefore rated as **moderately satisfactory** because the project achieved its objective of improving infrastructure in Freetown but was less successful in strengthening the capacities of agencies responsible for its delivery. As the infrastructure is not maintained adequately and some facilities are already falling into disuse, ***sustainability*** is rated as **unlikely.** Despite some improvement in the performance of GVWC, the ***institutional development impact*** of the project is **modest** mainly because the FCC, which is responsible for most of the new facilities, remains as weak as before. ***Bank performance*** is **satisfactory** due to good quality at entry and supervision and ***Borrower performance*** is also rated as **satisfactory**, mainly because of the performance of PIUs in safeguarding project achievements, despite extreme conditions imposed by the conflict.

**Lessons:**

- *Projects implemented in countries with an ongoing conflict need to be continually monitored* to identify and assess the conflict risk to the projects. Some types of projects, such as large-scale, capital-intensive projects, may be more vulnerable to conflict risk. Indicators to monitor can include proximity of conflict activity to project areas, extent of project risk in terms of potential losses (both human and material), and the level of support for the project, both locally and nationally. The Bank might consider disengagement until the environment improves because continuing project implementation under high-risk conditions is likely to prove counterproductive and expose the Bank and the Borrower to compensation and other claims that divert resources away from investment and development.

- *When project implementation is interrupted for a substantial period of inactivity due to conflict, technical and financial audits should be carried out* to reassess priorities for action. Partially completed activities, especially in relation to infrastructure such as roads and buildings, can deteriorate with long periods of inactivity when they are not maintained or sufficiently protected against adverse weather conditions. A technical audit can identify the remedial measures to secure completed activities and achieved outcomes. This would also provide an opportunity to assess the development effectiveness of the project and revise project objectives that may no longer be relevant or achievable under changed conditions in the country.

- *When a country is in or emerging from conflict, the Bank may need to be flexible about borrower compliance with loan covenants that necessitate substantial reforms.* A realistic timeframe should be agreed when attempting to introduce unpopular reforms in the context of violence and social instability. Implementing reforms such as universal water metering and increasing fuel levies are highly controversial issues and can even threaten post-conflict stability. While the experience of these two projects suggest that substantial reforms are possible even in conflict and post-conflict environments, Bank and Borrower strategies should be based on a realistic assessment of what is possible and achievable rather than agreements reached under very different circumstances.

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# Annex A. Basic data sheet

## Roads Rehabilitation and Maintenance Project (Credit 2451-SL)

## Key Project Data *(amounts in US$ million)*

| | *Appraisal Estimate* | *Actual or current estimate* |
|---|---|---|
| Total project costs | 92.74 | 43.15 |
| Loan amount | 45 | 42.6 |
| Co-financing | 36.89 | 0 |
| Date physical components completed | 06/30/1998 | 06/30/2001 |
| Economic rate of return | 30% | N/A |

## Staff Inputs

| Stage of project cycle | Actual | |
|---|---|---|
| | Weeks | US$ '000 |
| Identification/Preparation | 63.0 | 188.7 |
| Appraisal-Board | 53.5 | 146.5 |
| Supervision (including ICR) | 145.8 | 462.3 |
| **Total** | 262.3 | 797.5 |

## Project Dates

| | *Original* | *Actual* |
|---|---|---|
| Appraisal | 04/14/1992 | 04/21/1992 |
| Approval | 12/22/1992 | 12/22/1992 |
| Effectiveness | 04/27/1993 | 08/20/1993 |
| Closing | 06/30/1998 | 06/30/2001 |

## Mission Data

| Stage of project cycle | Month/ year | No. of persons | Days in Field | Specialized staff skills* represented | Performance Rating** | |
|---|---|---|---|---|---|---|
| Identification/Preparation | 01/83 | 2 | | SE, SHE | | |
| | 05/83 | 2 | | SE, SHE | | |
| | 08/83 | 2 | | SE, SHE | | |
| | 11/83 | 1 | | SE | | |
| | 02/85 | 2 | | SE, SHE | | |
| | 05/87 | 1 | | SE | | |
| | 04/91 | 2 | | PTS, STE | | |
| | 09/91 | 2 | | PTS, STE | | |
| Appraisal/Negotiation | 04/92 | 3 | | PTS, HE(Cons), ROE | | |
| | 06/92 | - | | - | | |
| Supervision | 01/93 | 4 | | STE, PE, C, ILOR | S | S |
| | 05/93 | 1 | | STE | S | S |
| | 09/93 | 2 | | STE, HE | S | HS |
| | 12/93 | 3 | | STE, RTS, HE | HS | HS |
| | 04/94 | 4 | | STE, RTS, HE, C | HS | HS |
| | 06/94 | 2 | | STE, HE | HS | S |
| | 11/94 | 6 | | 2 FA, RTS, HE, E, SOO | HS | S |
| | 03/95 | 3 | | HE, E, AS | S | S |
| | 06/95(MTR) | 6 | | FA, RTS, 2HE, E,SOO | S | S |
| | 04/96 | 2 | | SOO, HE | S | S |
| | 08/96 | 2 | | POO, E/UP | S | S |
| | 03/97 | 3 | | POO, FA, HE | S | S |
| | 05/98 | 1 | | HE | U | U |
| | 12/98 | 1 | | HE | U | U |
| | 06/99 | 1 | | HE | U | S |
| | 09/99 | 1 | | HE | U | U |
| | 12/99 | 2 | | HE, FA | U | U |
| | 05/00 | 2 | | HE, FA | S | S |
| | 11/00 | 2 | | SHE, FA | S | S |

* Staff Skills Key
AS=Airport Specialist
C=Consultant
E=Economist
FA=Financial Analyst
HE=Highway Engineer
ILOR=ILO Representative
PE=Principal Economist
POO=Principal Operations Officer
PTS=Principal Transport Specialist
ROE=Road Organization Expert
RTS=Rural Transport Specialist
SE=Senior Economist
SHE=Senior Highway Engineer
STE=Senior Transport Engineer
SOO=Senior Operations Officer
UP=Urban Planner

**Performance Rating Key
HS=Highly Satisfactory
S=Satisfactory
U=Unsatisfactory

# Freetown Infrastructure Rehabilitation Project (Credit 2511-SL)

## Key Project Data *(amounts in US$ million)*

| | *Appraisal estimate* | *Actual or current estimate* |
|---|---|---|
| Total project costs | 36.0 | 27.5 |
| Loan amount | 26.0 | 25.3 |
| Co-financing | 0 | 0 |
| Date physical components completed | 06/30/1998 | 06/30/2001 |
| Economic rate of return | 34% | N/A |

## Staff Inputs

| *Stage of project cycle* | *Actual* | |
|---|---|---|
| | *Weeks* | *US$ '000* |
| Preparation to Appraisal | 41.1 | 91.7 |
| Appraisal/Negotiation | 23.6 | 50.2 |
| Supervision | 74.24 | 247.4 |
| ICR | 3.51 | 28.1 |
| **Total** | 142.45 | 417.4 |

## Project Dates

| | *Original* | *Actual* |
|---|---|---|
| Appraisal | 03/19/1993 | 03/19/1993 |
| Approval | 06/10/1993 | 06/10/1993 |
| Effectiveness | 10/13/1993 | 09/13/1993 |
| Closing | 06/30/1998 | 06/30/2001 |

## Mission Data

| *Stage of project cycle* | *Month/ year* | *No. of persons* | *Days in Field* | *Specialized staff skills* represented* | *Performance Rating*** | |
|---|---|---|---|---|---|---|
| | | | | | *Impl. Progress* | *Dev. Objectives* |
| Identification/Preparation | 12/10/1992 | 6 | | 2ML (AF4IN and AF6IN), 3C (2 ME & and RVE), SE | | |
| | 03/03/1993 | 4 | | ME, CE, ES, SOO | | |
| Appraisal/Negotiation | 04/05/1993 | 4 | | TL, FA, 2C (M/CE and ES) | | |
| Supervision | 07/29/1993 | 1 | | TL (POO) | HS | HS |
| | 10/17/1993 | 4 | | TL, FA, 2C (M/CE & PS) | HS | HS |
| | 12/18/1993 | 2 | | TL, FA | HS | HS |
| | 03/09/1994 | 2 | | TL, FA | HS | HS |
| | 11/04/1994 | 6 | | TL, 2FA, SE, C (ME), DC | S | HS |
| | 05/04/1995 | 1 | | TL | S | HS |
| | 11/30/1995 | 2 | | TL, SE | HS | HS |
| | 08/15/1996 | 2 | | TL, UP | S | HS |
| | 03/09/1997 | 3 | | TL, FA, HE | S | S |
| | 10/23/1999 | 2 | | TL, C (CE) | U | U |
| | 10/13/2000 | 2 | | TL, ME | U | U |
| | 03/31/2001 | 2 | | TL, ME | U | U |
| ICR | 07/22/2001 | 2 | | TL, ME | U | U |

* Staff Skills Key

C=Consultant
CE=Civil Engineer
DC=Division Chief
ES=Environmental Specialist
FA=Financial Analyst
HE=Highway Engineer
ME=Municipal Engineer
ML=Mission Leaders
POO=Principal Operations Officer
PS=Procurement Specialist
RVE=Rating and Valuation Expert
SE=Sanitary Engineer
SOO=Senior Operations Officer
TL=Team Leader
UP=Urban Planner

**Performance Rating Key

HS=Highly Satisfactory, S=Satisfactory, U=Unsatisfactory