Report Number : ICRR0020245

1. Project Data

Project ID P096105	Project Name SL-Rural Dev & Priv Sec Dev SIL	
Country Sierra Leone	Practice Area(Lead) Agriculture	Additional Financing P125256

L/C/TF Number(s) IDA-H2900,IDA-H6970	Closing Date (Original) 14-Nov-2012	Total Project Cost (USD) 52,000,000.00
Bank Approval Date 22-May-2007	Closing Date (Actual) 14-Nov-2015	

	IBRD/IDA (USD)	Grants (USD)
Original Commitment	30,000,000.00	0.00
Revised Commitment	50,000,000.00	0.00
Actual	49,721,597.11	0.00

Sector(s)
Agricultural markets, commercialization and agri-business(38%):Other Industry, Trade and Services(25%):Other Public Administration(17%):Other Agriculture, Fishing and Forestry(15%):Agricultural Extension, Research, and Other Support Activities(5%)

Theme(s)
Micro, Small and Medium Enterprise support(23%):Rural services and infrastructure(22%):Rural markets(22%):Export development and competitiveness(22%):Rural policies and institutions(11%)

Prepared by	Reviewed by	ICR Review Coordinator	Group
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2. Project Objectives and Components

a. Objectives

The 2007 Project Appraisal Document (page 6) states that the project development objective was:
“to improve efficiencies along the value chain of agricultural commodities with higher benefits flowing to producers.”
The 2007 Financing Agreement Schedule I (page 5) states that the objective of the Project was:
“to support sustained growth in agriculture with increased competitiveness in export and higher value crops, increased employment and increased rice and palm oil production. Towards this end the Project would improve efficiencies along the value chain of agricultural commodities with higher benefits flowing to the producers.”

In September 2009, the 2007 Financing Agreement was amended by the Country Director to:
"to improve efficiencies along the value chain of selected agricultural commodities with higher benefits flowing to producers."
In June 2011, at the time of Additional Grant Financing, the date applied in this review for the point of restructuring, the Financing Agreement was revised to:
"to increase production of selected agricultural commodities by 20% and sales by 10% through improvements and efficiencies along the value chain for targeted beneficiaries."
This ICR Review applies the pre-restructuring FA and the post-restructuring FA in a split rating analysis.

b. Were the project objectives/key associated outcome targets revised during implementation?

Yes

Did the Board approve the revised objectives/key associated outcome targets?

Yes

Date of Board Approval

01-Jun-2011

c. Components

There were four original components (these were later modified at the time of the 2011 Additional Financing):
1. Domestic Marketing Improvement (Appraisal first grant US$12.63million, Actual US$12.94 million; Appraisal additional grant US$11.90 million, Actual US$12.80 million).
This included:
(a) domestic distribution channels with supply chain consolidation for crops, including rice, cassava, fruits, vegetables, poultry, livestock and fisheries. These were undertaken as pilot activities to improve the ability of farmers to market their goods in Freetown and other large domestic markets and supply consumers with commodities at competitive prices. This activity included domestic grading standards and packaging facilities;
(b) development of business models;
(c) development of bonded storage and warehouse receipts;
(d) rural market infrastructure improvements, particularly roads;
(e) provision of matching grants to trader and marketing associations;
(f) capacity building grants to local communities to help them contract with private entrepreneurs;
(g) knowledge management and technical assistance;
(h) provision of advisory services for an MIS system and to support training, demos, and workshops;
2. Agricultural Export Promotion (Appraisal first grant US$8.11 million, Actual US$6.55 million; Appraisal additional grant US$3.50 million, Actual US$2.70 million).
This included:
(a) implementation of an export promotion initiative to support beneficiaries, including agricultural producers, agricultural exporters and other private enterprises in promising value chains;
(b) upgrading and creation of market and export infrastructure;
(c) matching grants for technical support, training, product development and compliance with standards;
(d) rehabilitation of clonal seed gardens for cocoa, seedling trials and first-stage multiplication;
(e) support to the Standards Laboratory at Njala University to improve, reform and update phytosanitary policy and an import quarantine system; build capacity of the produce Inspectorate for grading and sealing of quality produce and provide support to the Standards Bureau;
(f) studies and capacity-building initiatives for identifying new markets for non-traditional agricultural commodities;
(g) a market information system to provide producers and exporters with information on market opportunities and increase their bargaining power.
3. Support to Farmer-based Organizations and Technology Improvement (Appraisal first grant US$7.34 million, Actual US$5.86 million; Appraisal additional grant US$1.8 million, Actual US$0.79 million).
This included:
(a) provision of Matching Grants to finance the strengthening of legally registered farmer organizations and their unions, agribusinesses, marketing entities, and other rural businesses through the provision of capacity building, policy regulations and market information;
(b) carrying out studies in strategic areas such as rehabilitation of agricultural research and export promotion to initiate future programs.

4. Project Management, Monitoring and Evaluation and Policy Regulations (Appraisal first grant US$5.39 million, Actual US$5.74 million; Appraisal additional grant US$2.80 million, Actual US$2.90 million).
This included: the establishment of a Project Coordinating Unit to carry out the management and monitoring and evaluation functions of the Project and support for the development of key policy regulations. It also included:
(a) studies in strategic areas such as rehabilitation of agricultural research and export promotion to initiate future programs;
(b) establishment of a project management information system, the carrying out of baseline studies, participatory monitoring and impact assessments, environmental and social monitoring, periodic project progress reviews and preparation of reports to be prepared under the Project;
(c) the formulation of appropriate policies to strengthen the enabling environment;
(d) the development of seed, fertilizer and pesticide regulations and the harmonization of policies and regulations governing the formation and regularization of farmer based groups, as well as the assessment and preparation of feasibility studies for setting up a commodity trading exchange.
With the Additional Financing grant of September 2011 that added US$20 million, there were some changes in components including:
Component 1, adding increased support to the rehabilitation of feeder roads in selected districts, reducing funding for matching grants.
Component 2, adding the strengthening of cocoa cooperatives for replanting and marketing and adding community radios for extension dissemination.
Component 3, adding further support for the strengthening of registered farmer based organizations and unions including the National Federation of Farmers, improving policy regulations, and providing marketing information, carrying out a study on rice marketing and implementation of the findings.
Component 4, strengthening the institutional capacity of the Ministry of Agriculture, Forestry and Food Security to implement project activities.

d. Comments on Project Cost, Financing, Borrower Contribution, and Dates

Project Costs:
The total project cost at appraisal was US$54.54 million and the actual at closing was US$50.28 million.
Financing: IDA Grant H2900-SL was for US$30.00 million equivalent with actual at closing of US$29.90 million equivalent. IDA Grant H6970-SL was for US$20.00 million equivalent with the actual at closing of US$19.19 million. The differences being attributable to exchange rate changes.
Borrower Contribution
Borrower contribution was planned to be US$0.60 million for the first grant, actual was US$0.46 million. Beneficiaries were expected to provide US$3.90 million but the actual was considerably lower at US$0.73 million. No borrower or beneficiary contribution was planned for the second grant.
Dates
The project was approved May 2007 but did not become effective until 15 months later in June 2008. The Mid-Term Review (MTR) was completed in July 2010. There were three restructurings. A level-2 one a year after effectiveness in June 2009 to revise the implementation arrangements, shifting the co-management of the project from the proposed equal partnership of the Ministry of Trade and Industry (MoTI) and the Ministry of Agriculture Forestry and Food Security (MAFFS) to having MAFFS taking the lead; in addition, there was greater focus directed towards the Local Councils (LCs). This was followed by a more significant Level-1 Restructuring in August 2009, then a third Level-1 for the Additional Financing in June 2011. This involved a further change in objectives. At this Additional Funding grant restructuring, the project closing date was extended by three years to November 14, 2015. The project closed three years behind the original schedule due to this Additional Financing. Actual disbursement of the original grant was achieved only six months behind the original projected date. It should be noted that the Ebola crisis hit during the final year of the project making implementation significantly more challenging.

3. Relevance of Objectives & Design

a. Relevance of Objectives

Original Objective
The original objective assessed is: “to support sustained growth in agriculture with increased competitiveness in export and higher value

crops, increased employment and increased rice and palm oil production. Towards this end the Project would improve efficiencies along the value chain of agricultural commodities with higher benefits flowing to the producers."

At the time of project appraisal, Sierra Leone was still recovering from the ten-year 1991 to 2001 civil war. A process of rebuilding was underway. Many households had been displaced. Agriculture represented about 50% of GDP and employed about 75% of households. Productivity at about 1 ton per ha for rice and maize was low. Farmers were faced with many constraints including access to inputs, credit, road communication and information. There was an urgent need for improved backwards and forwards linkages in the sector. Agriculture had rebounded from the low base resulting from the conflict growing at 27% in 2003 and 17% in 2004 but there remained much agricultural sector development still to be addressed.

The original objectives were highly ambitious, aimed at supporting sustained growth in the sector, increased export competitiveness, increased employment and increased productivity. The project attempted to address too wide a range of the major commodities and too many of the sectoral constraints. Indeed, there appear to be few potential activities of benefit to value chains that were *not* included in the project. In the end, with weak initial performance, a number of the activities had to be scaled back or dropped. Nevertheless, the overall concept of improved efficiency along value chains was not unsound if it had been more focused and prioritized.

In terms of consistency with the Borrower's strategy, Sierra Leone's Agenda for Prosperity 2013-2016 had, as an overall goal, a sustainable, diversified and commercial agriculture sector which ensured food self-sufficiency, increased exports, and the creation of jobs for men and women. The policy focused on increasing agricultural productivity along the agricultural value chain and promoting commercial agriculture and farmer-based organizations. A Smallholder Commercialization Program, initiated in 2010, closing in 2015 as part of the agricultural strategy, was a core part of this program. The follow-on program, the Inclusive Comprehensive Agricultural Development Program (ICADEP) will continue the strategy and will still have a particular focus on improved technologies for increased productivity.

In terms of consistency with the Bank strategy, the project was relevant to the country sector strategy at the date of project closing and the Bank's Country Assistance Strategy of 2006 to 2009 and 2010 to 2013. The latter placed priority in agriculture on: (i) rice self-sufficiency; (ii) commercialization of agriculture especially in cocoa and other crops in which Sierra Leone had a competitive advantage for exports; and, (iii) objectives in the area of sustainable fisheries.

Due mainly to the unrealistic breadth of the original objective, Relevance of the Objective is rated Modest

Revised Objectives

The objective assessed is: "To increase production of selected agricultural commodities by twenty percent and sales by ten percent through improvements in efficiencies along the value chain for targeted beneficiaries."

This objective was narrower and more focused but being a subset of the broader aim, it remained relevant to the broader Borrower and Bank strategies. The evolution of this revised objective is important to trace. It started from the original sweeping objective focused on growth, competition, employment and production. In 2009, it shifted to an intermediate objective which was to improve efficiency along the value chain. Then, at the point of additional financing, it changed again to focus more specifically on increased production and sales by means of improvements in efficiencies along the value chain.

There appears to have been some confusion as the project evolved about these changes in objectives because the ICR notes that the 2009 intermediate objective was "not the correct one" despite appearing in the Financing Agreement of 2009. The purpose of the 2011 restructuring was to respond better to the weaknesses emerging at the production end of the chain and to add some quantitative targets. It became apparent that improving the efficiency of the value chain was of limited value if there was insufficient production to feed the chain.

In conjunction with these changes, some of the key intermediate indicators were changed or dropped and replaced. This Additional Financing stage objective, which narrowed the intent substantially, was largely sound and more realistic than the excessive breadth of the original objective. However, the associated indicators offered limited criteria to assess changes in efficiency nor was the efficiency role of greater road improvement analyzed with respect to the trade-off against other activities.

Rating	Revised Rating
Modest	Substantial

b. Relevance of Design

Original Design.

The original design followed the findings of a number of studies including a Diagnostic Trade Integrated Study which highlighted the importance of employment creation and poverty reduction but concluded that it would require strength in export markets.

There were a number of weaknesses in project design. First, as noted above, there was a wide range of objectives that contributed to driving a complex design. Second, the design had weaknesses in the extent to which the logical chain from a revitalized extension service to agricultural enterprise productivity gains was sufficiently connected. Third, the design focused too much on value addition and market access and too little on the means of getting the productivity gains on farm that would feed this value chain. Fourth, the ICR notes (p. 20) that the passing of laws related to seeds, fertilizers and pesticides was not sufficiently linked in the logical chain to the project activities. This activity could probably have been omitted. Fifth, the design paid insufficient attention to the institutional coordination arrangements, both at the government ministry level,

where initially there were two equal government ministries trying in partnership to manage the project, and at the local level where there was insufficient attention to local councils and the institutional linkages between the players. The design should have proposed at the outset that Local Councils should be involved in the appraisal of local sub-projects and matching grant proposals as well as in monitoring them.
Revised Design.
While a number of weaknesses were addressed at restructuring partly by narrowing the focus, there were still some remaining weaknesses in the design and in the revised Results Framework. First, it was not clear in the redesign what the trade-off rationale was between the increased expenditure on roads and the commensurately reduced expenditure on other support to farmers; it is not evident that any such analysis was attempted. The decision seems to have been more political and disbursement related. Second, it was still not entirely clear what was to be measured to show “efficiency” gains along the chain although there was an indicator related to reduction of transport times.
The significant shift of balance towards rural roads had actually started in 2009 at the request of government and was consolidated and sustained into the post-2011 Additional Financing period. This new priority investment may have been somewhat excessive in terms of optimal investment complementarity since road expenditure displaced some of the resources that would have gone to other forms of production and marketing support. The ICR (p. 12) suggests that this shift to roads was partly due to the need to improve disbursement and notes that it was “not in tandem with the development objectives.” (By project closing, road rehabilitation had reached about 50% of total expenditure.)
Nevertheless, the optimal balance of investment for value chain support in Sierra Leone at that point in time is not self-evident. In IEG’s view, in a post-conflict situation with deteriorated infrastructure, with long-delayed maintenance and with still some displaced population, a predominant focus on production technology and farmer organization support activities would probably have been seriously constrained if rural road infrastructure had not been substantially improved. We do not find sufficient evidence in the ICR to judge whether the extent of the increased focus on roads to the point of 50% of expenditure at the cost of some of the support to farmers and input supply was sub-optimal or not.

Rating	Revised Rating
Modest	Substantial

4. Achievement of Objectives (Efficacy)

Objective 1

Objective
To support sustained growth in agriculture with increased competitiveness in export and higher value crops, increased employment and increased rice and palm oil production.

Rationale
This objective is broken down into three attributable elements: (i) the extent to which competitiveness in export and higher value crops improved; (ii) the extent to which employment increased; and (iii) the extent to which the production of rice and palm oil increased.
Improve competitiveness in export and higher value crops.
Outputs:
The productivity of cocoa at 0.65 tons/ha, somewhat exceeded the original target of 0.5 tons/ha. The increased productivity of cassava and rice was about 85% of the target increment. However, simply as production increases, these achievements are not sufficient to demonstrate improved competitiveness, although increased production would likely be one element of enhanced competitiveness.
Some of the achievement in cocoa production and marketing is reported to be attributable to the facilitation by the project of the formation of the cooperatively owned Kayeigorma Cocoa Company which supported farmer exports. It is plausible that the yield gains made cocoa more competitive with other suppliers but, in order to judge competitiveness, the efficiency of production increase would need to be known.
Outcomes and Intermediate Outcomes:
A key indicator in the results framework pre-restructuring was: “50% of targeted beneficiaries achieve 10% real increase in sales”. This was interpreted by the ICR as an increase in sales price. But it is not entirely clear how real increases in sales prices demonstrate enhanced competitiveness since prices would be largely exogenous. However, sales price gains due to quality gains, would be one part of the competitiveness story. There is evidence that with cocoa there were, in fact, gains in quality. (One problem with treating price as a measure of competitiveness is that, where efficiency has improved through a lowering of production costs, producers could actually compete better in a tight market while accepting *lower* prices at the same grade level.)
There is no other evidence that demonstrates competitiveness changes.
Increased Employment
Outcomes and Intermediate Outcomes:

There is no evidence on attributable employment changes. There was no formal original target number of beneficiaries other than an assumption of 300,000 made in the PAD economic analysis. At the time of the AF, the target beneficiaries number was 150,000. This was exceeded with 56,000 direct beneficiaries and 213,000 indirect. The project also set a new target for women beneficiaries at 20,000 direct and 80,000 indirect. Based on M&E, these were exceeded by 132% and 116% respectively. However, no relationship was demonstrated in the ICR between numbers of beneficiaries and changes in employment.
For the pre-restructuring objectives there is no other evidence on employment impact.
Increased rice and palm oil production.
Outcomes and Intermediate Outcomes:
Early in the project, palm oil was dropped because, with a Bank moratorium on support for oil palm due to forest impact concerns, this could no longer be supported by the project. In any case, there would have been insufficient time within the project period for improved productivity through better planting material to have been realized in a slow maturing crop like oil palm.
For rice, the Impact Study found rice yield increases of about 2 tons per hectare. As noted below under the revised objective, marketed value of rice rose by 72%.
For palm oil, there was a zero level of achievement on what was originally to be the major project commodity. The later productivity increases for the three main other commodities following the dropping of palm oil were (ICR Table 2): (i) 90% of the target for cassava; (ii) 83% of the target for rice; and, (iii) 150% of the target for cocoa. It is arguable that some of the resources originally intended for palm oil may have helped to foster these increases in other crops but, of these three, rice was the only commodity referred to in the original objective.

Rating
Modest

Revised Objective
To increase production of selected agricultural commodities by twenty percent and sales by ten percent through improvements in efficiencies along the value chain for targeted beneficiaries.

Revised Rationale
Outputs:
About 1.7 million improved cocoa seedlings were distributed to farmers along with technical support. As noted above, in terms of institutional support, the project facilitated the formation of the Kayeigorma Cocoa Company which provided export facilitation that contributed to the export achievements indicated earlier
Outcomes and Intermediate Outcomes:
Increased Production
The outcome indicator related to the production target was for 50% of target beneficiaries for the selected value chain commodities to increase production by at least 20% by the end of the project. The Impact Evaluation found substantial production increases in rice averaging 2.05 mt/ha and cassava averaging 12.34 mt/ha. Yields against targets as a percentage of increase are reported to be: Cassava 90%, Rice 233%, Cocoa 196%, well above the indicator targets.
Increased Sales
The Impact Evaluation found that farm gate prices received by project beneficiaries increased for cassava, rice and cocoa by 54%, 81%, and 101% respectively. The ICR reports that the marketed value of commodities between 2008 and 2015 increased by 301% for cassava, 72% for rice, 72% for vegetables, and 366% for cocoa. This may include area expansion.
Table 5 of the ICR (p.23) reports that against the sales price outcome target, cassava achieved 128% of target, rice achieved 150%, and cocoa achieved 201%. Looking at internationally traded prices over the project period, it appears that cocoa prices rose in current $ terms by about 30% from 2008 to 2015, a modest rise in real terms so it seems that quality probably did play a significant role in the cocoa price gain. The Project Team in discussion reported improvement in the grades of cocoa sold. The most significant project achievement in terms of incomes flowing to producers was a very large increase in average cocoa exports per household from 2 bags per year to over 10 bags per year over the period 2010 to 2015. Export volumes increased from about 150 MT in 2011 to over 720 MT in 2014. The ICR (p. 25) attributes this to the increased yields from improved planting material and an increase in area attributable to the project of 1,450 ha. Since the increase in production for cocoa appears to be similar to the percentage increase in yield between 2008 and 2015 it appears that the extended area was barely coming into production.
Value Chain Efficiencies
While increased production and sales alone are not a sufficient indicator of efficiency, it would be difficult to conceive of these increases not being at least partly due to efficiency gains along the chain, particularly where quality has improved. (Aggregate efficiency at the project level is discussed more fully under Section 5.) The ICR presents evidence of increased prices in real terms, noting that they greatly exceeded the targets. It is not entirely clear how ex ante price targets can be set for indicators since they depend substantially on internal supply and

demand for non-traded products and international supply and demand for traded goods, neither of which are under project control. But the aim was to achieve price gains through better quality, better timing, links to markets, better processing, better quality control, and increased trader competition, all of this partly enabled through road improvement. There are some measures given in the ICR that directly show value chain efficiency gains including the reduced transport times and it is certainly plausible that the improvements in grade quality in crops like cocoa were an important reason for better prices than would otherwise have been obtained regardless of market swings.

Number of Beneficiaries

As noted earlier, there was no formal original target number of beneficiaries other than an assumption of 300,000 made in the PAD economic analysis. At the time of the AF, the target beneficiaries number was 150,000. This was exceeded with 56,000 direct beneficiaries and 213,000 indirect. The project also set a new target for women beneficiaries at 20,000 direct and 80,000 indirect. Based on M&E, these were exceeded by 132% and 116% respectively.

Revised Rating

Substantial

5. Efficiency

The *economic rate of return* (ERR) at the time of appraisal was 34% but, as estimated in the Implementation Completion Report, it was lower at 22% but still substantially above the opportunity cost of capital. The ICR ERR methodology is generally thorough although there are a few questions on methodology raised below. The ICR explains that one of the differences between the appraisal and closing ERRs was that, due to the conditional Bank moratorium on palm oil investment support, the project did not invest in palm oil as planned. However this must be only part of the efficiency story since project funds that would have gone to palm oil went for other productive or support activities.The ICR argues (p. 26) plausibly that the increase in real farm gate prices was partly due to better market access due to the improved roads, as well as the project provision of market infrastructure and increased competition from traders also due to improved communications. Food scarcity during the Ebola outbreak may also have contributed temporarily to higher prices. The ERR at project closing estimated in the ICR was based on representative benefit streams from upland rice, cassava and cocoa, the three dominant commodities.

There are a few questions about the ERR methodology although these would probably have only a modest impact on the rate of return. First, the ICR appears to imply that changes in the discount rates change the rate of return. Other than as an opportunity cost comparator, different discount rates should only affect the Net Present Value. Depending on how these discount rates were applied in the analysis, the true ERR might be higher or lower or unaffected (if it was only applied to the Net Present Value calculation).

Second, it is also not clear why the economic analysis had to make assumptions about productivity increases to take into account better technology and improved inputs when the actual productivity increases had been measured and reported by the M&E system and the Impact Evaluation. It may be that the assumptions applied in the analysis were considered broadly representative of a range of measured data.

Third, the benefit streams from crop yields were measured as part of a yield estimation study in 2015 for the Impact Evaluation, the yields for rice being estimated from sample areas where some crop cutting was done. However, the sample size of the crop cutting was very small, only 13 farms. Cocoa yield estimates may be more reliable having come from the Impact Study and the cocoa company.

Fourth, it is not clear why the ICR tabulations of enterprise budgets (p. 51) apply the same labor use in the with and without project scenarios despite substantial yield increases. (e.g. harvesting over twice as much cassava after technology improvements would undoubtedly call for higher labor.) However, this would make only a small impact on the overall ERR.

The *sensitivity analysis* (ICR p. 53) indicates that the ERR is quite sensitive to productivity change, to the cost of production, and to the inclusion of cocoa. The latter is not surprising since it was a dominant income earner with high incremental production at 40% of total net benefits. A 10% reduction in productivity levels reduces the overall rate of return by more than 10% which would bring it down close to the opportunity cost of capital. Increasing the variable costs of production by 10% reduced the rate of return by more than 10%.

On *cost-effectiveness* of the substantial roads component which was 50% of total costs, US$25.74 million was spent to rehabilitate 971.9 km of feeder roads, about 600 miles. At this total cost, the cost per mile would be about US$43,000 per mile, quite a high cost. However, this includes structures such as culverts, bridges, etc. It also includes additional general maintenance support to Local Councils. Based on a study by the African Development Bank in 2014, compared to rural feeder roads funded by the African Development Bank, the project costs were about 25% higher. There is no evidence on the quality of construction, however, the ICR suggests that the two cost figures from the project roads and the African Development Bank study may not be comparable and that, apart from the additional maintenance support to Local Councils, “it is widely acknowledged that the technical specifications of the RPSDP … feeder roads is better than other similar projects … in Sierra Leone”.

On the question of the cost-effectiveness of roads, while much of the roads benefit is considered by the ICR to be reflected in the productivity and quality increases in commodities, as noted above, there appears to be no social benefits stream assumed in the analysis of roads for improved human access such as reaching sources of off-farm work in towns or improved access to clinics or schools. Particularly in a post-conflict period with displaced households, this may have been significant.

On overall *operational efficiency*, there were substantial initial delays due to the impact of the 2007 elections, poor coordination within

government, weak procurement capacity and issues with the institutional framework. This led to delays in effectiveness. However, while this delayed the benefits it also delayed the costs (only 4% of the first grant had been spent 2 years from Board approval). So this probably had limited impact on the overall rate of return. Nevertheless, the project had a poor early period with a later acceleration and was overall less cost-effective than it could have been.
While there are some questions about the ERR methodology, some limitations in the data and some overall project operational inefficiency during the early years but with a catch-up in later years, there is evidence of substantial attributable gains in production, for example cocoa exports going from 2 bags to 10 bags per farmer over a five year period, and there were significant gains in prices which appear to be at least partly attributable to improved quality. These benefits and others contribute to the 22% Economic Rate of Return, significantly above the opportunity cost of capital. Although not without questions, on balance, Efficiency is rated **Substantial.**

Efficiency Rating
Substantial

a. If available, enter the Economic Rate of Return (ERR) and/or Financial Rate of Return (FRR) at appraisal and the re-estimated value at evaluation:

	Rate Available?	Point value (%)	*Coverage/Scope (%)
Appraisal	✓	34.00	80.00 ☐Not Applicable
ICR Estimate	✓	22.00	80.00 ☐Not Applicable

* Refers to percent of total project cost for which ERR/FRR was calculated.

6. Outcome

Based on a split rating, the project is rated Moderately Satisfactory. The project had moderate shortcomings.
Before restructuring, Relevance of Objectives is rated Modest and Relevance of Design Modest. The three elements of the objectives were only modestly achieved. Efficiency is rated, on balance, Substantial. With Efficacy only Modest in aggregate, the overall rating before restructuring is Moderately Unsatisfactory.
After restructuring, Relevance of Objectives and Design is rated Substantial. Efficacy and Efficiency are rated Substantial. The overall rating is therefore Satisfactory.
Given a formal restructuring date of June 2011 disbursement was 41% before restructuring and 59% after restructuring. The Outcome against the original objectives is Moderately Unsatisfactory. The Outcome after the revised objective is Satisfactory. Since the larger share of disbursement came after the restructuring date, the overall outcome rating calculated on the 6-point scale is (3 * 0.41) + (5*0.59) =4.18. Rounding leads to an outcome value of 4 on the 6 point scale, or Moderately Satisfactory.

a. Outcome Rating
Moderately Satisfactory

7. Rationale for Risk to Development Outcome Rating

There are a number of significant risks.
The Farmer-Based Organizations (FBOs) still have quite low capacity and have not yet reached the point of being self-sustaining. There is a need for a program of continued support. In some cases, they are managing processing facilities that are beyond their still limited capacity. For these FBOs it may be necessary to have contract management from private entities for O&M. Also, the FBOs are not yet grounded and buffered by linkages with any agency at national level.

The District Councils do not have sufficient capacity to maintain the roads and, again, the FBOs either do not have the capacity to do it themselves or do not have the incentives having not been involved in design and implementation.
The marketing information system is not reaching the planned beneficiaries in sufficient numbers. There remains unfinished business with a need to redirect and reorganize the information system to make it more useable and more sustainable.
In terms of exogenous shocks, there is a risk of a further Ebola outbreak which, at this quite critical point in development, could affect the project structures and processes.
There are a number of institutional issues including poor performance in the Local Councils, reduced interest in the project activities by the central Ministry of Trade and Industry stemming from the time when it was determined that the project should be under the Ministry of Agriculture, Forestry and Foods Security. There are therefore concerns about future coordination.
Finally, the ICR expresses concern about the lack of contractual arrangements between buyers and sellers in the absence of the project matching grants to serve as an incentive for contractual relationships.

a. Risk to Development Outcome Rating
Substantial

8. Assessment of Bank Performance

a. Quality-at-Entry

There were some strengths in the project design but a number of weaknesses. It was fully consistent with the Bank and country strategies and drew from previous project and program experience. However, in the original design, there appears to have been insufficient analysis to come to a minimum set of complementary activities that would be realistic within the different institutional capacities and the project timeframe. There was insufficient attention to institutional capacity at several levels. What was needed was a minimalist theory of change pointing to a more focused set of activities, if necessary phased. Productivity, at the base of the pyramid, appears to have been neglected in the original design. In terms of coverage, there was an unmanageable number of supply chains, nine in all, making management difficult. On institutions, there was insufficient attention to local ownership and the role of the Local Councils. The Bank over-estimated the commitment and under-estimated the challenge of coordination between the two ministries, MAFFS and MoTI. This left implementation problems for supervision to resolve. It is rare that two agencies with no designated lead works effectively.
The design team seems to have not addressed sufficiently the palm oil estate expansion issues with respect to land rights even had the Bank restriction not halted the component.
The indicators had a number of weaknesses. They were more linked to the PDO than to the FA. Given the original FA objective, the indicators needed to focus more on the measurement of the extent to which competitiveness improved and on the incremental gains in employment as well as increased productivity. The other elements of the objective beyond productivity were weakly addressed in terms of methodologies for measurement. The PAD price indicator had to be changed later due to lack of original specification that price increases should be in real terms. But in any case, as discussed earlier, given price fluctuations outside the project’s control, it is questionable whether sales values alone was a suitable indicator of improvements in quality or timeliness. Quality would have been better measured through grade changes, at least in crops with quality standards such as cocoa.
As the ICR correctly summarizes, the indicators were not sufficiently SMART (Specific, Measurable, Attainable, Realistic, and Timely). Related to this, they did not sufficiently address the questions of the Who, What, When, Where, Which, and Why. Strangely, the PAD did not even have a target number of beneficiaries. It was left to the supervision team to deduce this from the PAD economic analysis.
The appropriate safeguards were selected at the design stage, Environmental Assessment OP 4.01 and Involuntary Resettlement OP 4.12. The Pest Management safeguard was also mentioned in the PAD but not later reported in the ICR. A Grievance Redress Mechanism was put in place but this appears to have emerged later during implementation.

Quality-at-Entry Rating
Moderately Unsatisfactory

b. Quality of supervision

Supervision missions were regular and adequately staffed. There were three Task Team Leaders (TTLs) during the life of the project but the ICR does not report any issues with this. The midterm review, including the restructuring, appears to have been satisfactory.
Overall, supervision appears to have been quite pro-active in adjusting to changing circumstances, including adjustments that were needed almost immediately due to the effectiveness delay.
Some of the weaknesses in the results framework carried through to the post-restructuring results frame and associated indicators. They still were somewhat limited in their relevance to the objectives and in their measurability. The issue of exogenous price change effects on

the use of sales values as an indicator remained.
The restructuring was largely appropriate and timely given the earlier slow progress. Arguably it should have been done somewhat earlier. As already noted, the shift towards a greater proportion of investment on roads at some cost to other activities, mostly those progressing slowly, is difficult to assess without more evidence. In a post-conflict situation aiming at value chains and marketing linkages, roads are frequently a good investment with many social as well as marketing and input supply linkages. Putting half the total project expenditure into roads and bridges etc. may have been an appropriate proportion although the ICR notes that it was “not in tandem with the development objectives.” IEG accepts that the changes may have shifted a little too far towards a road building project but there is insufficient evidence to determine what would have been an optimal sectoral and sub-sectoral balance ex post.

Quality of Supervision Rating
Moderately Satisfactory

Overall Bank Performance Rating
Moderately Satisfactory

9. Assessment of Borrower Performance

a. Government Performance

Government performance was mixed. The government gave full support to the project, especially during project preparation.
Effectiveness was delayed. It took 18 months for the recruitment of the PCU core staff. If this was historically typical of recruitment times in the Sierra Leone government service, then it should have been factored into project phasing. In other words, it should not have come as a surprise to either the Bank or the government.
However, the government did not perform well in the practical application of the coordination intentions. Early in implementation in July 2009 a Level I restructuring modified the institutional arrangements, shifting the co-management of the project from the proposed equal partnership of the Ministry of Trade and Industry (MoTI) and the Ministry of Agriculture Forestry and Food Security (MAFFS) to having MAFFS taking the lead. In addition, there was greater focus directed towards the Local Councils (LCs).
At a lower level of government, there were weaknesses in Local Council support but this proved to be quite variable. Some LCs did not provide timely agreed counterpart contributions. However, it would be fair also to note here the impact of the Ebola crisis (ICR para 52).
During implementation later in the project, government became more pro-active in following up on issues but the ICR reports (p. 35) that the commitment of MoTI, once it was no longer an equal partner, waned.
On financing, government provided the agreed national counterpart contribution, and met most fiduciary obligations, but the ICR reports that towards the end there were some cash management problems leading to a downgrade of the financial rating.

Government Performance Rating
Moderately Satisfactory

b. Implementing Agency Performance

The implementing agency was the Project Coordination Unit. Overall, their performance was generally adequate once staffing was complete which took time.
The PCU appears to have done a good job in managing a number of studies including the contracted independent Impact Study. There was a corruption issue with procurement in one case but this was responded to.
The ICR reports that PCU staff assigned at District level were dedicated and committed, working with both beneficiaries and Local Councils. Once established and fully staffed, there appear to have been few gaps in staffing over the project period with the PCU generally at full complement. The initial delay in recruitment for the PCU staff and the consequent slow start up was not the fault of the PCU, it was a government failing.

Implementing Agency Performance Rating
Moderately Satisfactory

Overall Borrower Performance Rating
Moderately Satisfactory

10. M&E Design, Implementation, & Utilization

a. M&E Design

The ICR (p.13) reports more on the implementation than on the M&E design.
Design appears to have been mostly sound judging by the fact that implementation was able to proceed fairly quickly and data eventually available were of value in assessing performance. M&E was handled by the PCU and the design incorporated specialist M&E staff.
As noted earlier under Quality at Entry, particularly in the pre-restructuring situation, there were weaknesses in the extent to which the indicators were measurable and realistic that presented some difficulty to the M&E team.

b. M&E Implementation

M&E was implemented and was sustained. Forms and processes were developed and used. Periodic surveys were carried out during implementation including, at the outset, a baseline survey. All stakeholders were responsible for reporting their activities to the PCU quarterly. Monthly, quarterly and annual reports were provided.
Unusually, the data collected was also the basis for a price information system used by the extension system. There were beneficiary scorecards to give feedback.The greatest challenge for M&E implementation was a high turnover in staff. This is often the case because it is rare that there are recognized public sector positions in M&E which, for government staff, makes spending too long in such a post a career risk. However, in this case again, the Ebola crisis may have been a factor.

c. M&E Utilization

The ICR reports that data was presented in periodic reports. M&E findings contributed to the prioritization of supported value chains in 2011. The M&E system and associated impact study was sufficiently robust to enable a comparison between treatment and non-treatment groups providing some evidence of project impact. The Mid-term Review utilized M&E data to change the approach to the rehabilitation of feeder roads. The ICR reports that the ICR economic analysis benefitted from the data from the system.

M&E Quality Rating
Substantial

11. Other Issues

a. Safeguards

Environment
The project was classified as a Category ‘B’ project under OP/BP4.01 Environmental Assessment and Involuntary Resettlement (OP/BP 4.12) and Pest Management (OP4.09) safeguards were triggered. An Environmental and Social Management Framework, a Resettlement Framework and a Pest Management Plan were completed and reportedly applied. The ICR reports (p 14) that supervision mission reports documented satisfactory ratings for safeguard implementation. Land for construction was either purchased by beneficiary groups or voluntarily donated by landowners. In each case, where land acquisition was necessary, the evidence on the land acquisition process was provided to the center as part of the application package before subprojects were funded. This was backed up by field visits to check willingness to participate and evidence of land agreements as well as other requirements. However, the ICR still notes that the field visits needed to be more robustly focused on aspects such as waste generation, noise and dust pollution, and vulnerable groups.
The ICR reports that feeder roads were diverted to avoid taking farmland but it appears that in some instances land had to be taken since it is reported that farmers were given time to harvest their crops before civil works commenced. A grievance address mechanism was set up with committees at the chiefdom and district levels. Two cases of grievance are reported which were apparently resolved satisfactorily by the committees. However, the ICR (page 15) reports that there was some weakness in the recording of grievance processes.

There were weaknesses in environmental and social safeguards capacity but, during implementation, this was backed up by support from the Environmental Protection Agency and the Ministry of Gender and Social Welfare. Staff from both these institutions participated in safeguard monitoring missions. However, there was no safeguard specialist at the PCU level.

b. Fiduciary Compliance

Financial Management

For the most part, audits were prepared and interim financial reports provided in a timely manner. However, towards the end of the project, Implementation Status and Results Reports downgraded the financial rating to moderately satisfactory due to cash management issues (ICR page 18).

Procurement

There was one reported case of fraud by a contractor who presented a fake bank guarantee certificate. This contractor was disqualified and national authorities were expected to follow up. Bank team follow-up on this appears to have been conscientious since it was found that the same contractor had been awarded another contract. The documentation for that contract was genuine but the Bank procurement specialist advised that this contract too should also be canceled. The Bank’s Integrity Vice Presidency (INT) conducted an investigation that led to imposition of a sanction of debarment with conditional release on the contracting company.

c. Unintended impacts (Positive or Negative)

None reported.

d. Other

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12. Ratings

Ratings	ICR	IEG	Reason for Disagreements/Comment
Outcome	Moderately Satisfactory	Moderately Satisfactory	---
Risk to Development Outcome	Substantial	Substantial	---
Bank Performance	Moderately Satisfactory	Moderately Satisfactory	---
Borrower Performance	Moderately Satisfactory	Moderately Satisfactory	---
Quality of ICR		Substantial	---

Note

When insufficient information is provided by the Bank for IEG to arrive at a clear rating, IEG will downgrade the relevant ratings as warranted beginning July 1, 2006.

The "Reason for Disagreement/Comments" column could cross-reference other sections of the ICR Review, as appropriate.

13. Lessons

1. **In an agricultural value chain project, attention needs to be given to all stages in the chain not just the post-harvest marketing and processing end.** Productivity of crop or livestock commodities in terms of both quantity and quality may need particular attention as the base of the pyramid.

2. **In a project with feeder road funding, in order to ensure ownership: (i) beneficiaries should be leaders in the process of applying for**

local resources along with the project support and this involvement should extend subsequently into the management and implementation of maintenance; and, (ii) local government should be closely involved alongside the beneficiaries at the outset. Respective responsibilities should be planned and made clear.
3. **In a value chain project, there are likely to be difficult project design trade-offs due to the inherent complexity of a project that addresses the majority of the constraints along the whole chain. These trade-offs need to be explicitly recognized and the priority elements in the chain identified.** Providing credit for farmers may be essential to stimulate and support production and marketing yet this also adds a further layer of complexity. In this project, lack of finance for farmers was a constraint that might have been partly addressed through input dealer and supplier credit or from better linkages with other sources of finance. But it should be noted that Bank learning suggests that setting up separate project-based sources of finance outside financing institutions with the capacity to manage credit is rarely a sustainable or efficient solution.
4. **In a value chain project with many institutional players, both central and local, it is important to identify a single lead agency and to carefully set out the ground rules for how it will ensure, and create incentives for, coordination.** It is also important to monitor coordination progress. In this case, the dual responsibility set up initially did not work because implementation arrangements simply assumed that coordination would follow from a mandated committee.

14. Assessment Recommended?

No

15. Comments on Quality of ICR

The ICR was generally sound. It was difficult to follow the sequence of restructurings and changed objectives. But these were, in reality, complex and confusing given the different statements of objectives in PDOs and FAs which did not mesh. The story of the project set out in the ICR was generally quite clear. The split rating in the ICR followed a different sequence to that in the Guidelines by doing the split at the Achievement of Objectives level.
There were some other weaknesses including: (i) lack of explanation of the use of different discount rates in an ERR analysis; (ii) some differences between text and tables on component costs; (iii) in the economic analysis Annex, the same labor value assumptions in the with- and without-project efficiency scenarios which seems improbable given the substantial yield increases; and, (iv) failure to report on the Pest Management safeguard, although the safeguard probably, in the event, was not needed.
The lessons were quite well done although they did not really help to resolve the common dilemma that, on the one hand, the design complexity covered most of the important linkages for complementarity in a value chain approach but, on the other hand, tested institutional capacity to breaking point. It would have been useful if the lessons could have suggested how that trade-off could have been better handled.

a. Quality of ICR Rating
Substantial